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RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, FINANCE;

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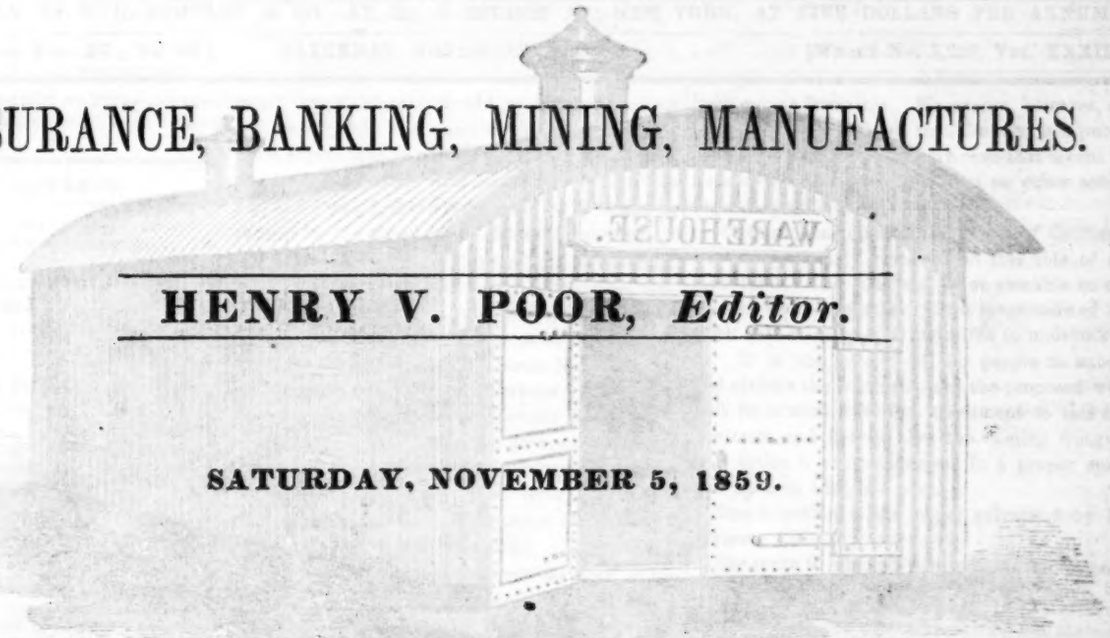

HENRY V. POOR, *Editor.*

SATURDAY, NOVEMBER 5, 1859.

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ESTABLISHED IN 1831.

NEW-YORK:
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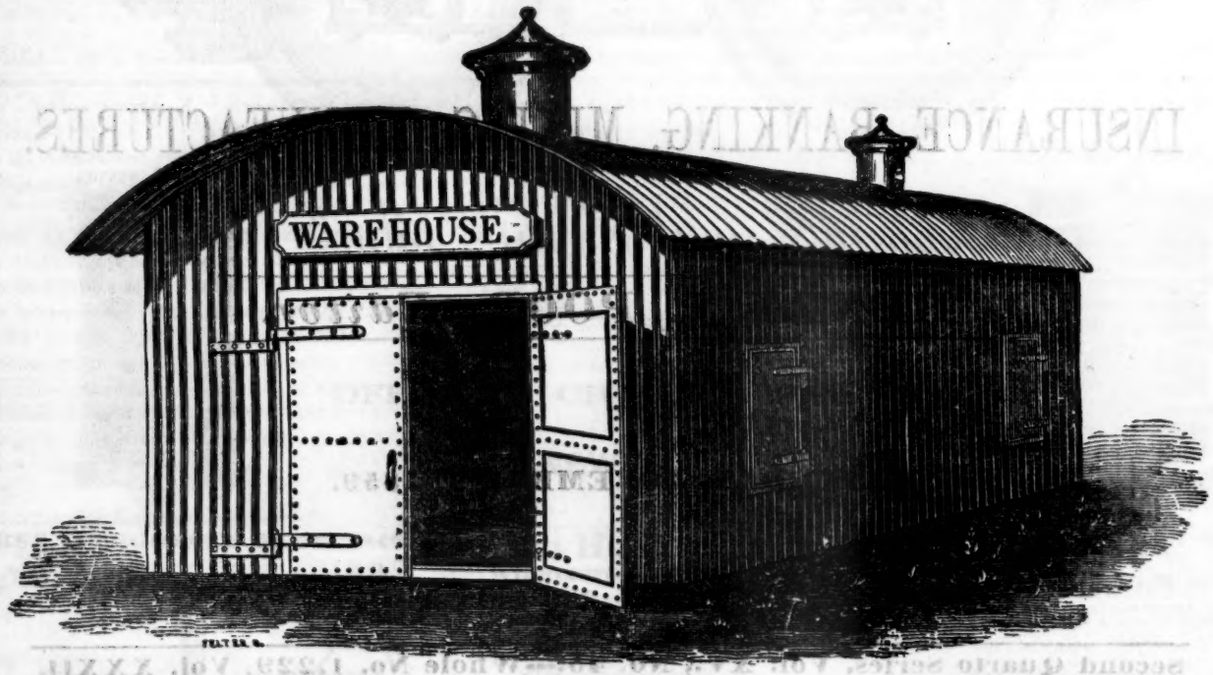

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PRINCIPAL CONTENTS.

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO. No. 9 SPRUCE ST.

New York, Saturday, November 5, 1859.

Pacific Railroad in California.

They have been having a great railroad convention in California in which both the people and sentiment of the State on the subject of a railroad across the continent were well represented. It embraced delegates from nearly every section of the State as well as from Oregon and Washington Territories, and an earnest and determined feeling prevailed, indicating that the States on the Pacific slope were prepared to go to work and complete the portion of the line through the Sierra Nevada, as soon any assurance should be given that the portion between the Missouri State Line and the eastern slope of the mountain was provided for.

At the convention a series of resolutions, expressive of the views of the convention was adopted. The most important one was that offered by Gov. McDougal, urging upon the State the appropriation of the sum of $15,000,000 for building the California section of the road. Governor McDougal supported his resolution by an able speech. The sum is a large one, but not greater, probably, than the exigency requires. With adequate provision made for other portions of the great line, California should at once commence her own. With the excellent credit which the State enjoys, due in part to the manly assumption of a large debt, which the courts had decided was illegally created, there would be no difficulty in raising for the object stated the sum proposed.

The popular route for California is one directly across the continent, and which must pass, consequently, not very far from Salt Lake City—or perhaps, we should say, on the most direct route from the eastern slope of the Sierra Nevada to the western boundary of Missouri, where a continental line would probably strike several independent routes connecting with all the great eastern cities. A road on the extreme southern route is not favored, as it would, probably, stop some time at San Diego, and increase the importance of that point, at the expense of San Francisco.

With regard to the physical features of the route, we give a paper submitted to the convention by W. S. Watson, Esq., Civil Engineer, according to which the obstacles to be encountered are far from being as formidable as has been supposed. For the most difficult portion of the route, no surveys have been made, so that the estimates made are only approximations, and may be wide of the result. The obstacles from snow are regarded as inconsiderable, though they appear to us to be the most serious ones to be encountered. We do not think any inference can be drawn from the effect of snow in the North-eastern States, where there is seldom more than a foot lying on the ground at any one time. On the Sierra Nevada it accumulates, as we understand, to the depth of many feet, and packs into a firm and unyielding crust. This is a matter deserving careful investigation, which should be made before the work is commenced.

The action of this convention will undoubtedly give a decided impulse to the great project of a Continental Railroad. The commencement of this work cannot be delayed much longer. Its necessity and usefulness is becoming universally admitted, and the public voice will soon force Congress to act. From the Western boundary of Missouri to the Eastern boundary of California, the means, or a greater portion of them, must be contributed by the United States Government. There is no escape from this. We cannot, however, expect to act till it is felt that the road is a public necessity, and till it is clearly seen that means for its construction can come from no other source than the public purse.

We think the action of the people of California will find a hearty response on this side of the mountains. The road will be as valuable to one section as to the other. The magnitude of the work will constitute no objection to undertaking it. It is the mission of our people to subdue and civilize the continent, and the proposed work will be a most effective instrument to this end. We trust and believe that the coming Congress will make a commencement in a proper spirit, and upon an adequate plan.

The following is the paper submitted by Mr. Watson:

The route to which I now call the attention of this convention, commences on the Bay of San Francisco at Benicia, thence to Sacramento, thence to Folsom, thence to Marysville, thence to Oroville, thence to Chico, in Butte County, thence to the head of Chico and Deer creek, thence to the head of Susan River, thence to Honey Lake, near the State line of California; and I shall, as briefly as possible, lay before you the facts that have been elicited by an *instrumental reconnoissance*, and about which there can be no dispute. I will present them in the following sections, with the most prominent features of each section, such as distance, cost of construction, snow line, elevations, and any other prominent features that may present themselves

	Miles.
Section 1, to embrace the country between Benicia and Sacramento	58½
Section 2, Sacramento to Folsom	22
Section 3, Folsom to Marysville	40
Section 4, Marysville to Oroville	25
Section 5, Oroville to Chico	23
Section 6, Chico to head of Deer creek	51
Section 7, Deer creek to head Susan river	38
Section 8, Susan river to Honey Lake valley	34
Section 9, Honey Lake valley Section	16
	306½

Making a total distance from tide-water to the head of Honey Lake of 306½ miles.

SECTION I.

From Benicia to Sacramento the line runs through the counties of Salano and Yolo. The highest elevation reached on this section is at the Montezuma hills, in Solano County, 125 feet above tide-water at Benicia, which again falls to 22 at

Sacramento. With 12 miles of curvature in 58½ miles of line. The general direction is north of east; and the entire cost, including equipment, rails, bridges, and fixtures, is estimated at $1,950,000.

SECTION II.

This section embraces the Sacramento Valley Railroad, a distance of 22 miles. This road is already running, and cost the stockholders $1,250,000. The elevation at Folsom is 225 feet above the point indicated as the terminus of the last division. The line is generally straight, making six miles of northing in twenty-two miles of easting. This point is 247 feet above tide-water. This road being built, it is unnecessary to say more on this division.

SECTION III.

This section is also now under construction, as the California Central Railroad, and will be completed by January of 1861. The entire cost is $2,500,000, as per contracts. The line is generally straight, having about 12 miles of easy curvature in forty miles. The heaviest grade is forty-two feet per mile, with thirty miles of grade less than twenty feet to the mile. The direction is west of north, making seventeen miles of westing in forty miles of northing. The highest elevation is 407 feet above tide water, at Benicia, which again descends to 157 feet at the Yuba. Of the entire distance to the Yuba it is unnecessary to speak, as the line is in the Sacramento Valley, and subject only to the general undulations thereof.

SECTION IV.

This division embraces the country between Marysville and Oroville, in Butte County, and forms the line known as the California Northern Railroad, now under construction, and to be completed in 1861, at a cost of $1,750,000. The entire elevation attained on this division is 428 feet above tide-water, at Benicia. This line is nearly straight, making only 1¼ miles of easting for 25 miles of northing. The entire curvature is 2½ miles of a minimum radius of 1,900 feet in twenty-five miles. The city of Oroville is also in the main Sacramento Valley, and, consequently, has facilities for railroad construction, which need not be expatiated on here.

The latitude of Oroville is 39° 21″ 33′ N. The only stream crossed on this division is the Honcut, of thirty feet span. The highest grade is forty feet per mile for two-thirds of a mile.

SECTION V.

With this section commences the only part of the Sacramento Valley, so far, that has not been located on by railroad companies, and this presents new ground. The line it proposes continues along the valley for twenty-three miles in a northeastwardly direction, to the crossing of Chico Creek, and, being along the foot hills on the east side of the valley of the Sacramento, there can be no difficulty in constructing a railroad. The entire rise for these twenty three miles is 214 feet above Oroville, and making the point at Chico 642 feet above tide-water at Benicia. The streams to cross on this section are Feather river, of 227 feet, and twelve feet high; Table Mountain Creek, twenty-seven feet span and ten feet high; Little and Big Butte, of 100 feet in width each, and five feet above the high water mark. The general direction is N., 56° W., and the line nearly straight—having four miles of easy curvature in twenty-three miles.

Thus, then, it will be seen that we have advanced 168½ miles in a direction necessary from tide water to the Atlantic States, as all roads leaving from California by a central route *must* pass the Rocky Mountains at or near 42° 15′ of north latitude, and so long as we are south of that latitude, and advancing in the direction required, we are subserving two important purposes—that of building a State and an Atlantic States railroad.

SECTION VI.

At the crossing of Chico we have attained an altitude of 642 feet above tide-water, and now the real difficulties of the construction of a Pacific Railroad commences—namely, at the base of the Sierras, and to which, in my humble opinion, the attention of this convention should have been most exclusively directed. I, however, now propose to show that a railroad line can be built, and successfully run, from this point to Honey Lake, near the Eastern boundary of the State of California.

The line I propose takes the ridge between the waters of Chico and Big Butte, and traverses that ridge for 51 miles. The first ten miles has an average grade of 45 1-10th feet per mile, making 451 feet to a point on this ridge opposite Inskups, and at an elevation of 1,093 feet above tide-water, the direction is north 38 30 east; with a maximum grade of 93 feet per mile; with 23 miles of curvature of easy curves, none of which exceed 2° curves.

From this point the general direction for the next 10 miles is north 41 east, and an average grade of 63 feet per mile, with a maximum grade of 88 feet per mile; the curvature in these 10 miles is 4½ miles, with a maximum curvature of 3° curves. This point is at an elevation of 1,721 feet above tide-water at Benicia.

From this point the general direction is 32 east for 20 miles. Having now ascended the main plateau of the first bench of the foot-hills of the Sierras, the general course of the line is more uniform, and the grades run from level to 100 feet per mile, making from the point indicated 55 feet per mile average rise. The curves are easy, as the ridge is wide, and readily adapts itself to railroad curves. The line now enters the chapparel fields, which extend to Walker's Plains on the south, and to Lawson's Butte on the north. The ridge is but little broken with streams, and such as a road can traverse almost in any direction. The elevation at the bottom indicated at the terminus of these 20 miles is 2,823 feet above tide-water.

From this point to the head of Butte Creek, the line passes a succession of gaps and valleys, and approaches the summit of Butte Creek in a distance of 11 miles, where the road could take almost any direction from east to north, as the ridge is, in some places, 10 miles wide; to the head of Butte Creek the general direction is north, 52 east, with grades ranging from 35 to 155 feet per mile, and average, as per profile, 80 feet per mile to Butte Creek Meadows, which elevation is 3,769 feet, above tide-water. Between the Butte Creek Meadows and head of Soda Valley Creek, lays the impenetrable Sierra Nevada, so much talked about, and which, instead of being the snow-capped mountains which as have always been represented, is as easy of access as almost any of the approaches to the head of the Delaware or the Susquehanna, the main summit from point to point across is only six miles, and starting with a point six miles from Woodville, in Plumas County, the line passes between the two points in a distance of 15 miles, with the meadows to the right, and the main summit to the left, on a grade of 81 feet per mile, and a general direction of north, 67 east for eight miles, and of north 28 east, for seven miles, striking a large valley on the summit and head of Soda Valley Creek, and as beautiful a spot in summer as can possibly be imagined, the entire elevation of this valley, which is the highest point attained on this survey, is 4,988 feet above tide-water at Benicia.

The entire cost of this section, from the foothills to the summit on Soda Valley, I have estimated at $4,600,000, including all cost of a complete and running railroad.

SUMMIT SECTION VI.

For 15 miles, the entire snow belt, the obstructions of snow is not more than in some of the roads in the northern part of the State of New York, as I have passed this summit in March with mules; on the opposite ridge leading thereto, there has been a road for the last six years, and which has been much used by emigrants and teamsters for the last four years, and I might here also state, and I have no doubt but a great many of the members of this convention can bear me out in the fact of a stage coach passing this summit with eleven passengers, up and down, in 1857, making the trip from Honey Lake to Oroville, in thirty hours driving time, I have myself passed this summit with a covered wagon, from Honey Lake to Oroville, in twenty-two hours driving time, and have no doubt that a railroad can be successfully worked through this summit at this point.

For the entire distance from the Sacramento valley the country abounds with the largest pine timber that I know of in the State, and will one day be an immense revenue to a railroad, in the transportation thereof to market.

The entire distance traveled from the valley is 77 miles. through a country which, until recently but little known, but which abounds in all the natural resources calculated to make a rich and important part of the State. Along the line and in its immediate vicinity are large tracts of rich and valuable land, in valleys varying from 10 to 100 square miles, and even on this dreaded summit of the Sierra Mountains is situated the Cold Spring and other ranches, where all the products of the farm are raised in abundance.

SECTION VII.

This division embraces that part of the route lying on the head of Deer Creek, Soda Spring Creek, Butte Creek and Susan River; and here it may also be observed that Deer Creek discharges into the Sacramento; Chico, into the Sacramento; Butte, into the Sacramento; Butte and Soda Creek, into Feather River; and Susan River, into Honey Lake. This section embraces a distance of 23 miles, from the main summit on Soda Creek to the head of the North Fork of Susan River, and has the appearance of an extensive and wide-spreading succession of meadows, some of which have the appearance of extreme fertility, and separated from each other by low ridges of heavy timbered land. The grades on this section are undulating, none of which are above 46 feet per mile, rising and falling in about equal ratios, until the line strikes the head of Susan River, at which point the entire elevation has deceased 4,762 feet above tide-water.

About 6 miles to the southeast lies the Big Meadows, on Feather River; and I may also remark that the most singular feature of the entire mountains of this State, as far as I have explored them, is this head of Feather River. The main source is in these meadows, which are 20 miles east of the main Sierra ridge, and yet the water discharges into the Sacramento valley. This, in fact, accounts for that vast canon, known on Feather River to rest between Rich Bar and the mouth of Butte Creek, some parts of which, namely: from the top of Spanish Peak to Rich Bar, a distance of 6 miles, descends 9,800 feet, and completely divides the Sierras separating Spanish Peak ridge from the continuation, as seen from Lawson's Peak.

It has, indeed, sometimes seemed to me that nature has provided this Pass for the very transit of a railroad, which she has refused in her more impenetrable mountains. I am almost persuaded that it would be worth while to make a passage with instruments in this canon, and if it could be done, the snow difficulty and the grades of higher latitudes would at once be avoided, as I am persuaded that Rich Bar cannot be over two thousand feet above tide-water, at a distance from the valley of sixty miles.

Another wonderful feature of this section of country which has been now fully explored, is Big Meadows of Feather River. One of these meadows is twenty-seven miles in length, nearly east and west, and varying from one to eight miles in width; another joining the above to the east, and forming a right angle with the above, is from eight to ten miles by eight, the two making a section area of 230 square miles, where stock to a large amount is annually driven from the Atlantic States and Oregon, on their way to this State, and sometimes wintering here. The Main head of Feather river is of itself a curiosity, well worthy the trouble of a visit. Issuing from the eastern side of a low range of hills is the Cosumnies, a river of two hundred and six feet in width, and two feet deep, with a two mile current, and at a distance of one and a half miles from the extreme head, the stream is

three hundred and twenty-one feet in width, and on the 14th day of August, 1858, the water was three feet deep at Abbot's crossing on the Oregon trail.

The cost of this section from the head of Deer's Creek to the head of Susan river, thirty-eight miles, I have estimated at $2,600,000.

SECTION VIII.

This section embraces the descent into Honey Lake, a distance of thirty-four miles, with an average grade of sixty-two feet per mile, descending to the east the general course of the section, 10° south of east, to the north end of Honey Lake. The first ten miles on the head of Susan River has an average descent of one hundred and eleven feet per mile; the twenty-four miles on the east end of the section has an average grade of forty-five feet per mile.

At Susanville, on Susan River, in Honey Lake Valley, the line descends from the ridge to the valley, thence for fifteen miles to the north end of the lake the line lays on the valley as level as the valley of the Sacramento. The entire cost of this section I have estimated at $2,526,000; the fifteen miles from Susanville to the north end of the lake, I have estimated at $450,000.

It has been conceded that a road once at Honey Lake there is no difficulty in connecting with any line that may come from the Atlantic States through the South Pass in the Rocky Mountains.

And, Mr. President, I should here call your special attention and that of this Convention, that there is no point on this line, as herein designated which lays north of 41 degrees north latitude, as follows: The latitude of Oroville is 39° 21′ 33″ north; latitude of Deer Creek summit is 40° 16′ 25″; latitude of head of Susan River is 40° 46′ 12″; latitude of Susanville, Honey Lake, is 40° 19′ 33″; longitude of north end Honey Lake, 119° 22′ 18; making Honey Lake Valley in the State of California.

SUMMARY OF ESTIMATE.

	Miles.	*Cost.*
Section 1	58½	$1,900,000
" 2	22	1,400,000
" 3	40	2,500,000
" 4	25	1,750,000
" 5	23	1,000,000
" 6	62	4,600,000
" 7	38	2,600,000
" 8	34	2,526,000
" Honey Lake Valley	16	500,000
		$18,776,000

Making a grand total of eighteen and three-quarter millions of dollars, and on a line which, be it observed, would subserve the following results: First, of having a State Railroad along the present line of travel, and where all the travel of the northern part of this State and Oregon would concentrate, as being through the most populous counties of the State, and who will build the road as far Chico in any event. Secondly, the purpose of being on the most direct route *in the State* to Honey Lake Valley and the South Pass of the Rocky Mountains, thereby being such a route as Oregon could reach, either from the Bend of the Humboldt or through the extreme north of this State, into her own territory, by the way of the Susan River summit, and on the train that is now and has been traveled for the last ten years by wagons, at all seasons of the year.

British Coal Exports.

Messrs. Laird, of Liverpool, in their monthly circular, give the following particulars respecting the British Coal Trade: The total exports during August were—from the Northernt ports, 353,048 tons; Yorkshire ports, 27,338 tons; Liverpool, 71,220 tons; Severn ports, 160,045 tons; and the Scotch ports, 48,170 tons—making a total of 659,821 tons, against 528,537 tons in the same months of the previous year. The total exports from January to August were 4,499,956 tons; in the same period of 1858, 4,229,324 tons, being an increase of 270,632 tons.

Locomotive Adhesion and Steep Gradients.

On the reading of Mr. Isaac's paper in November last, at the Institution of Civil Engineers, there was a perceptible appearance of incredulity upon the statement that a locomotive, with tender and a loaded wagon attached, had worked successfully, and for some time, up a gradient of 1 in 10. The weight of the entire moving mass—entire tender and wagon—was 49 tons, the gravity of which, therefore, must have been 4.9 tons. The friction was not, probably, as much as 6 of a ton, as at 20 lb. even per ton, it would amount to but 980 lb. The engine weighed, in running order, 24 tons on a level—the whole weight being on the driving wheels. On an incline of 1 in 10, however, it would be but nine-tenths of this, or 21.6 tons. It was to be concluded, therefore, that an engine, having an available adhesive weight of 21.6 tons, had overcome a total resistance of 5.5 tons, equal to a trifle more than one-quarter of the weight available for adhesion. It might be doubted whether the tractive power of the engine, or the force developed by the action of the steam at the peripheries of the driving wheels, would be sufficient to render such a high proportion of adhesion effective; but it appears that the engines in question had very large cylinders and very small wheels, to wit: 19 in. cylinders, 22 in. stoke, and eight coupled driving wheels, each 3 ft. 7 in. in diameter. Taking, therefore, the formula $\frac{d^2lp}{D}$, where $d\times$diameter of cylinder, and D diameter of wheel, each in inches; $l\times$length of stroke, in inches; and $p\times$pressure in pounds per square inch, we have, with but 70 lb. of steam on each square inch of the pistons, 12,929 lb. of steam tractive force, equal to more than the assumed amount of adhesive power.

The question of the power of locomotives working upon steep gradients turns, therefore, upon that of the adhesion of the wheels upon the rails. Although engineers have been accustomed to refer with ridicule to Blenkinsop's notable contrivance for gearing the engine to the rails, few practical men, we apprehend, are aware of the actual adhesion of locomotive driving wheels. It is estimated variously at from one-twelfth to one-fifth of the insistent weight, or the weight exerted by such wheels upon the rails. That the proportion of the whole weight, usefully exerted in adhesion, is very capricious, every engine driver well knows. In some conditions of the rails it is difficult for the engine to start its own weight into motion upon a level. But with clean rails, there are many facts going to show that the adhesion of the wheels is even more than one-fourth of the insistent weight. Morin found the friction of cast iron on cast iron, when wet, to be .314 of the weight by which the surfaces were pressed together. The friction of pear tree on cast iron was .617 of the weight. The success of Robertson's frictional gearing, which appears entirely to supplant all systems of toothed wheels, shows how, also, with a modification of plane surfaces, metallic friction may be greatly increased, and with the peculiar form of the flanged surfaces of railway wheels, it is probable that much of the "bind" relied upon in the fractional gearing is brought into effective play. The form of the surfaces in contact has certainly much to do with their mutual friction, however the result may be affected, or otherwise by the more area of the bearing surfaces. We have always been told that friction between surfaces of any given kind was dependent on weight only, and altogether irrespective of the extent of surface in contact. Yet every one who has observed the working of engines having, in one case, plain or cylindrical tyres on their driving wheels, and, on the other, ordinary flanged tyres, is aware that the latter, under conditions otherwise equal, have the greater available adhesion. We cannot always determine the exact weight upon the driving wheels, since, under many circumstances, it varies considerably, when the engine is working, from the weight, carefully obtained, of the engine at rest upon a level weighing machine. It is very easy so to connect the engine and tender that a considerable portion of the weight of the latter shall bear upon the foot-plate of the former. Again, at the ordinary height of the coupling bar influence between the engine and tender, the moment steam is applied a portion of the weight of the engine is lifted from the front upon the hind wheels. If we conceive the engine to be coupled to its train through a connecting link attached to a standard rising several feet above the foot-plate, any power applied, as is that of the steam, in the horizontal line of the cylinders and driving axle, would have a tendency to tip the engine from its front upon its hind wheels. In ascending a gradient, say of 1 in 30, 1-30 of the whole weight may be altogether lost, since the engine would press upon the rails, even when standing still, with but 29.30 of its actual weight, as determined upon a level; but if the engine have driving wheels behind, and bearing or leading wheels only in front, the base of the centre of gravity falls farther behind upon an ascending gradient than upon a level, and consequently increases the weight on the hind wheels. So, too, the water in the boiler, if a constant total quantity be carried (and we may say that more is required in ascending a steep gradient than on a level, in order to avoid burning the forward ends of the tubes), the water runs backward over the fire-box so much, indeed, that on a gradient of 1 in 66, the difference of the apparent height of the water in a boiler 16½ feet long inside, is 3 inches, and, on an incline of 1 in 10, nearly 20 inches. Even the strong discharge of steam from one or two large safety valves on the boiler, perceptibly increases by the re-action against the air, the weight of the engine upon the rails—a circumstance which is not mentioned in order to attach any material importance to it, but simply because it is a physical fact.

But so far as we can know the weight upon the driving wheels of an engine, whilst it is at work, we may presume that the ultimate adhesion of the wheels, on clean rails, is at least one-third of the weight acting to produce adhesion. Carefully noted particulars of actual experiments were introduced into the discussion upon Mr. Isaac's paper—particulars which showed that the working adhesion had been found in some instances, to be from three eighths to two-fifths of the weight upon the driving wheels, as weighed upon a level platform and at rest. Mr. Flachat, in an appendix to his paper recently read before the Institution of Civil Engineers in Paris, and of which we have commenced the translation in another column of the *Engineer*, quotes cases wherein the effective adhesion of the driving wheels, probably with the assistance of sand upon the rails, was equal to one half of the insistent weight; and to show to what extent adhesion is dependent upon the form of the surfaces in contact, he also quotes the following case: In a straight line a gradient of 1 in 57½ was immediately succeeded by one rising at the rate of 1 in 40½; the former was laid with narrow convex-topped rails of an old pattern, the latter with broad-topped rails giving a good width of bearing. It was found in practice that the same engine would ascend, with a given load, with greater apparent ease, at least with less slipping and greater speed, on the steeper than on the lighter gradient. Yet the gravity of 1 ton, which, upon the latter gradient, was but 39 lb., must have been, upon the former, over 55 lb., and the united resistances of friction and gravity must have been, at the least, one-third more on the gradient of 1 in 40½ than upon that of 1 in 57½.

If an engine, with all its weight upon coupled driving wheels, has a tractive and adhesive power equal to two-fifths of its whole weight, it would draw about 150 times its own weight upon a level, equal, with an engine of 25 tons weight, to a train of 3,750 tons. Upon a gradient of 1 in 10, such an engine would press with but 9-10 of its actual weight, and its adhesion would be reduced therefore from 40 to 36 of its weight; whereby it would take up the incline its own weight, and about two and a-half times as much more, a 25 ton engine taking itself and a train weighing sixty-two and a half tons.

We by no means intend to imply that either of

the results thus deduced has been ever accomplished. That they could certainly be effected, it is not essential that we should stake our opinion, whatever that may be worth, in asserting. But there is reason to believe that locomotives can exert much more propelling power than is commonly supposed. Many of our readers would at one time have believed it impossible that a locomotive could work successfully up the Oldham incline of 1 in 27 for 1½ miles. Competent engineers at one time declared that such a result could not be accomplished.

Modern railway practice is becoming more and more reconciled to heavy gradients. Their abstract disadvantage is palpable, but there are often many advantages in their adoption. A difference between gradients of 1 in 100 and 1 in 50 may become a difference of 25 per cent. of length in favor of the line on which the latter are adopted; whilst, with heavy gradients, the earth-work, bridging, and tunneling, are likely to be very much less than where a flatter line is adopted. Again, the cost of locomotive power by no means forms the total working charges of a railway; and the increased wear of railway iron, and of rolling stock, consequent upon working heavy gradients, would often be more than offset by the interest upon the total outlay necessary to avoid them.

In France, M. Flachat has come out strongly against the scheme going slowly forward, under the authority of the Sardinian Government, for tunneling Mount Cenis. He proposes a line, upon the natural surface of the ground, across the Alps, and is prepared to defend the heavy gradients and sharp curves which would be necessary in carrying out such a plan. It is his wish to renew the discussion not only in France but in other countries, as to the working of lines so situated, and from his high professional position and great practical experience, we have no doubt his invitation will meet with a proper response.—*London Engineer.*

Journal of Railroad Law.

DECOY SUBSCRIPTIONS TO RAIL STOCKS—HOW SOME RAILROADS ARE BUILT.

The following case recently determined in Pennsylvania, illustrates the principles of law applicable to what are called "decoy" subscriptions to companies intended to be formed. The facts of the case were these:

William Robinson, upon the 17th day of February, 1853, subscribed for one hundred shares of the Pittsburg and Connellsville Railroad Company, at fifty dollars per share. The subscription was in writing, and in the usual and regular form. When calls were made upon him for payment of instalments, however, he refused to pay; and the present suit was brought against him by the company, to enforce the payment.

At the time when the subscription to the stock was given, Mr. William Larimer, Jr., was the President of the company; but he was subsequently succeeded by some other individual, who was unwilling to carry out the whole of the contract as understood by the defendant, Robinson. Mr. Robinson alleged that he did not wish in reality to buy the stock, but that Mr. Larimer wished him to become a subscriber for a certain number of shares; and in order to induce him to become a subscriber, he agreed that he would at no time call upon him for the payment of the subscription, and that he should not in fact own the stock, or ever become liable to the company thereon. Whatever might have been the equitus as between Mr. Robinson and Mr. Larimer, as between the company and Mr. Robinson, the court decided that Mr. Robinson was indebted to the company for the full amount of the subscription, which, according to the verdict, amounted to $5,960.48.

Mr. Robinson set up two defences to the suit

First, that he subscribed for the stock at the request of Mr. Larimer, the President of the company, with the express understanding that he was not either to pay for, or to hold, the stock for which he subscribed, and that the same was to be cancelled.

Second, That the stock was afterwards taken by the company from Larimer, as his own, by virtue of a previous purchase from Mr. Robinson, and thereby the claim of the company against Robinson was extinguished.

There was no proof, however, to sustain his second defence. There was no evidence that Robinson ever sold, or that Larimer ever bought and re-sold to the company the stock in question, and this part of the defence entirely failed. We give only so much of the opinions as relates to the first ground of defence.

On the trial of the case, in the first instance, Judge WILLIAMS charged the jury as follows:

This is an action to recover the unpaid instalments alleged to be due on one hundred shares of the capital stock of the Pittsburg and Connellsville Railroad Company, subscribed for by the defendant, on the 17th of February, 1853. The plaintiffs having given in evidence their charter, the defendant's subscription, the calls for the instalments, and the notice of the Treasurer, are entitled to recover unless the defendant has shown that he has a good and valid defence to the action.

The defendant contends that he is not liable for the unpaid instalments in question, because the subscription was made by him at the request of William Larimer, Jr., the President of the company, with the express understanding that he was not either to pay for or hold the stock for which he subscribed, and that the same was to be cancelled. In support of this position, he has given in evidence the certificate of William Larimer, Jr., verified by affidavit, showing the fact to be as alleged. This evidence is objected to as incompetent, on the ground that it tends to contradict the contract or agreement of subscription, given in evidence by the plaintiff. It seems to me that the objection to the evidence is well-founded. No principle of law is better settled than that parol evidence is inadmissible to contradict, vary, or change the terms of a written contract, where there is neither fraud or mistake in the transaction. This evidence does tend directly and positively to contradict the terms of the contract of subscription, and must, therefore, be disregarded by the jury. It is not pretended that any fraud was practiced on the defendant to induce him to make the subscription. He must have known, when he made the subscription, that he was thereby rendering himself liable to the company for the amount of the stock for which he subscribed; and if it was the understanding that he should neither pay for the stock or hold it, but that the same should be cancelled; it is his misfortune that he did not have the stock transferred to the company, or his subscription cancelled, during the Presidency of Larimer; or that he did not require of Larimer satisfactory indemnity against any demands of the company on account of the subscription, before making the same. If he made the subscription, on the faith of the pledge, or assurances of Larimer, that he should not be called on to pay for the stock, he must look to Larimer to make good his pledge. It is no defence to this action for the instalments, which, by the very terms of the subscription, he agreed, and became liable, to pay.

To the charge the defendant excepted; and a verdict having been rendered for the plaintiff, the defendant removed the cause to the Supreme Court.

The opinion of the appelate court was delivered by Judge Woodward, and is as follows:

The assignments of error are all founded on the charge of the court, and are supported by such verbal criticism as are easy to be made; but which amount to nothing when they overlook the plain purport, intent, and drift of the language used. In looking through the charge of the learned judge, we think it was more favorable to the defendant than it should have been. For instance, he puts the answer to the first ground of defence on the incapacity of parol evidence to control the written subscription, whereas he might have set aside that branch of the defence on the ground of fraud also.

If the defendant's subscription was made for the purposes as explained in Larimer's certificate, it was, whether so intended or not, a fraud on the company, and on all subsequent subscribers, the legal consequence of which would be, that while the defendant might not reap any advantage from it, he would be held to all the responsibilities of a *bona fide* subscriber.

The court did not deprive the defendant of the benefit of his position, that Larimer had taken this stock off his hands, and transferred it to the company, and so extinguished it.

They applied the written memorandum at the foot of the subscription to the stock transferred in 1848, among which were 107 shares in the name of the defendant; and hence the memorandum had no other effect upon the subscription of 1853 than to entitle the subscribers to a credit on each share of $1.07. This balance resulted from their former payments of $2.50 on each of the transferred shares, for which they had received from Larimer $1.43 a share—leaving them out of pocket $1.07 a share—the amount which was to be credited on the new subscriptions. We apprehend that this was a very sound conc lusion from all the evidence in the case, and we conceive that the defendant has no reason to complain of it. In the absence of all explanatory proof as to the time when the memorandum was added to the formal subscription, the legal presumption would be, that it was there when the subscription was made. And the evidence of Veeder fixed it there as early as August 1853.

Referring to the jury the only hypothesis which the evidence seemed to justify as to the time and application of this memorandum, the court declined to submit the question whether the stock sued for here was or was not part of the stock purchase by General Larimer, and by him transferred to the company.

And they were quite right in this; for there was no evidence to raise such a question. On the contrary, the evidence was that the stock which Larimer transferred to the company was purchased by him prior to the time of the defendant's subscription. And if a purchase and transfer, subsequent to the subscription sued on, there was not a title of evidence. It was labor lost, then, to at-

tempt to torture from such evidence the favorite defence relied on here.

The court might have dealt with it more summarily than they did; but it is no just ground of complaint that it received more attention than it deserved.

The judgment is affirmed.

Buffalo and State Line Railroad.

The following is a comparative statement of the earnings and expenses of the Buffalo and State Line Railroad for four years, from June 1, 1855, to June 1, 1859.

Earnings.	1855-6.	1857.
June	$57,793 00	$71,879 27
July	50,149 69	60,933 84
August	56,607 10	68,763 84
September	72,893 01	94,622 77
October	90,180 87	110,869 05
November	97,312 54	110,893 62
December	107,910 21	120,175 62
January	87,731 25	87,135 56
February	65,955 75	76,217 14
March	89,803 18	123,029 98
April	132,123 67	121,056 19
May	95,003 55	79,970 47
Total	$1,003,463 82	$1,125,547 35
	1858.	1859.
June	$75,893 27	$66,219 37
July	68,549 73	66,079 09
August	67,582 73	73,376 55
September	87,844 72	90,219 42
October	94,004 10	88,022 78
November	79,564 53	87,234 81
December	91,055 61	81,078 28
January	77,505 56	69,493 34
February	61,163 71	68,231 64
March	93,737 60	80,837 24
April	87,704 76	64,893 69
May	66,134 35	55,650 88
Total	$950,740 67	$891,337 09
Expenses.	1855 6.	1857.
June	$62,541 07	$74,682 17
July	45,329 41	42,034 68
August	40,562 53	47,394 64
September	37,750 39	89,241 68
October	43,819 19	81,609 99
November	54,748 49	50,785 18
December	42,032 47	148,475 64
January	53,323 22	83,617 21
February	62,968 85	55,548 70
March	68,782 58	73,765 91
April	66,639 91	47,842 33
May	45,488 70	129,414 83
Total	$623,986 81	$924,412 96
	1858.	1859.
June	$51,832 65	$41,509 62
July	62,265 36	39,837 29
August	55,861 39	40,666 37
September	65,892 12	71,444 87
October	93,552 86	35,400 20
November	35,063 83	41,415 81
December	46,261 31	45,033 85
January	38,514 23	37,007 64
February	49,863 00	25,906 64
March	53,390 02	25,830 46
April	41,681 97	34,50[illegible] 53
May	46,920 49	35,[illegible]83 38
Total	$641,099 23	$4[illegible]4,536 93

Net Earnings.			
1855-6	$879,477 01	1857-8	$309,641 44
1856-7	201,134 39	1858-9	416,800 16

1859.	Earnings.	Expenses.
June	$59,31[illegible] 97	$38,813 80
July	49,0[illegible]66 39	33,787 87
August	6[illegible]818 48	45,886 60
September	[illegible]9,370 08	32,111 08

New York and Erie Railroad.

26 Throgmorton Street,
London, 14th October, 1859.

To the Editor of the Am. Railroad Journal.

Sir—Nothing will so much promote the interests of American Railways as thorough investigation. Much English capital is embarked in them; and as the *Times* of this day justly says—"America, which might at this juncture—the want of employment for British capital—have afforded the *most serviceable* field for the employment of British capital to the *advantage not merely of the two countries, but of the world*, is at present not to be seriously named as a competitor for our financial confidence." And why not? Because such a vast amount of worthless Railway Bonds and Shares have been negotiated in this country that the very name of American Securities is causes British capitalists to regard the individual who addresses them, with distrust; and, indeed, he is almost vexed for wasting his time upon so worthless an employment as the study of their intrinsic merits. Yet, if American Railways had been more closely studied, and their financial agent less implicitly believed, the result would have been far different. English capitalists need not have lost one cent of their principal, and yet have received a high rate of interest for their money. Having well studied the statistics of English and American Railways, I fearlessly challenge comparison between the two; well knowing that an impartial judgment will be in favor of well conducted American lines. Can the United Kingdom produce a line to compare with the Western Railroad of Massachusetts; the Buffalo and Lake Shore; the Little Miami; the New York Central; with some of the Southern lines, or with the best conducted railways of New England? Let the British capitalist answer. All *he* knows about American Railways is deduced from the results of lending to such lines as have sought foreign aid, and have been endorsed by those who should have known the character of the undertakings before they recommended them. In a small way I may include myself in this general confidence making; but then I retailed the opinions of those I thought more capable than myself of forming a correct judgment, I had not acquired the insight into the working of American Railways as has since been my ardent study to attain.

That American railway securities will become a favorite investment in this country, I do not doubt; for the investor may obtain first-rate security, and from six to seven per cent. for his money. But such things as unprotected Erie bonds, Illinois Central shares, and the like, will not find supporters again in this market. The day for obtaining British capital to uphold sinking American schemes is, it is to be hoped, passed; and an new project will be tested by better standards than have hitherto influenced the judgment of our capitalists. We shall have no more Erie schemes for selling Fourth Mortgage bonds at par, upon the assurance of a London Committee, that the earnings of the road equaled 11 per cent. dividend upon its capital; when, at the time, I was enabled to show to the chairman of the committee, and several gentlemen esteeming themselves high railroad authorities, that the road from 1853 had not earned interest upon more than its first three mortgages. Why, I could not then tell. But subsequently that problem was solved, and your columns have exhibited the result. That result was made publicly known, before the London Deputation to visit New York, to consult with the New York Directors, had been appointed. And yet, the basis of the proposition to be submitted by them is founded upon the "Premises and Arguments" approved at the meeting of the Bond and Shareholders, held in London, to nominate Mr. Evans and Mr. Splatt to their mission.

These Premises and Arguments, which appear in your Journal of the 17th ult., are founded upon the assumption that the road has sufficient vitality in itself to secure the re-payment of some $1,000,000, required to discharge pressing claims; and that this is so, is evident from letters canvassing those Premises and Arguments, wherein the proposers of the scheme adoped, ridicule the idea that the road was only capable of earning $1,400,000 net revenues, which will suffice for $20,000,000 of debts. I question the correctness of those Premises. I contend that the first object of the Deputation, or, more properly, of those who promote the Deputation, is to investigate thoroughly the accounts of the company, to see why it is that the road does not earn more than its net profits show. If they will do this, it will prove an interesting as well as a profitable investigation.

Hitherto the road has not been equal to its debt, and not improbably because it has no western terminus. It ends nowhere! And the New York Central can carry passengers and *paying freight* from New York west or east at a less gross cost than the Erie. Whether this new line which is to tap the Erie at Olean, and carry a direct traffic west and south-west, may make the road a formidable rival to the Central, has yet to be proved. The proposed line will doubtless be constructed sooner or later and upon an ordinary estimate it recommends itself to the notice of those who apparently will lose their investment, unless some new element can be introduced to make the Erie a paying line. With your permission I will resume the consideration of the prospects of the New York and Erie, awaiting the report of the deputation, which will be most certainly considered.

Wm. Lance.

Lehigh Luzerne Railroad.

The tunnel and superstructure of this road being completed, it was formally opened for public use on the 20th ult.

The tunnel through Council Ridge is 1,023 feet long, 21 feet wide, and 15 feet high, the natural rock forming the arch, except at the south end, where for 120 feet a brick arch was put in. The grade of the road in the tunnel is 102 feet below the crest of the mountain pierced with the drill and powder blast, to open an iron way from the Hazleton bride-groom train to the bride-bed of anthracite in the basin Black Creek.

The President of the company is Algernon S. Roberts, Esq., a gentleman of practical capacity and thorough acquaintance with the geological formation, physical topography, and mineral resources of the Lehigh region, and who, besides, has a keen insight into the operations of the coal market, into which the Black Creek region is soon to send down an amount of coal apportioned to the general consumption and competing sources of supply.—*Pottsville Mining Register.*

Buffalo and Lake Huron Railroad.

We learn that this road is driven to its utmost capacity at the present time. The demand for cars to carry forward the wheat that is offered is greater than can be accommodated. An international bridge is needed to facilitate the entry of the trains into this city.—*Buffalo Com. Adv.*

RAILROAD SHARE LIST, including Mileage, Rolling Stock, etc., etc.

An *asterick* (*) occurring in the column headed "Rolling-Stock," signifies that the cost is included in that of "Railroad and Appurtenances." A *dash* (—) signifies "nil." Running *dots* (.....) signify "not ascertained." Land-Grant Railroads are in "*italics.*"

Years ending.	Railroad. Main Line.	Railroad. Lateral and Branch Lines.	Railroad. 2nd Track and Sidelngs.	Road in progress or projected.	Equipment. Engines.	Equipment. Cars. Passenger.	Equipment. Cars. Freight, etc.	Companies.	Abstract of Balance Sheet. Property and Assets. Railroad and Appurtenances.	Rolling-Stock.	Invested in other works.	Liabilities. Share Capital paid in.	Bonded and Mortgage Debt.	Floating Debt.	Total, incl. all other assets and liabilities.	Road operated, incl. road leased, etc.	Mileage run by locomotives with trains.	Earnings. Gross.	Net.	Dividends.	Price of shares.
	M.	M.	M.	M.	No	No	No.		$	$	$	$	$	$	$	M.	M.	$	$	p. c.	p. c.
								ALABAMA.													
30 Jun. '59	43.3	——	----	72.3	3	2	19	*Alabama and Florida*	1,086,278	*	——	539,396	473,500	101,205	1,127,174	27.3	.....	59,430	22,359	——	----
28 Feb. '59	30.3	——	----	58.1	2	2	19	*Al. bama and Mississippi*	461,505	30,991	——	335,010	109,500	21,632	518,965	30.3	.....	55,791	31,852	——	----
31 May '59	99.2	——	----	68.4	7	7	84	*Ala. and Tennessee Rivers*	2,101,007	144,549	——	1,054,915	713,226	212,496	2,264,468	99.2	.....	155,628	78,907	——	----
30 Jun. '59	57.0	——	----	171.3	...	...	...	*Mobile and Girard*	1,500,000	*						57.0	.....	76,773	21,006	——	----
1 Jan. '59	319.2	14.7	----	213.0	25	18	661	*Mobile and Ohio*	7,252,801	681,859	114,894	3,441,859	4,051,547	726,546	8,360,702	202.0	.....	769,787	420,000	——	----
28 Feb. '59	88.5	28.4	----	——	20	14	272	Montgomery and West Point	1,819,403	279,435	100,000	1,419,672	922,621	18,956	2,462,492	116.9	.....	446,153	211,880	6	----
16 Dec. '59	——	——	——	295.8	——	——	——	*North East and South West*	728,000	*	——	105,760	.....	.....	.....	——	——	——	——	——	----
.. .. ..	——	——	——	26.1	——	——	——	Tennessee and Ala. Central	.....	.....	.....	.....	.....	.....	.....	——	——	——	——	——	----
								ARKANSAS.													
.. .. ..	——	——	——	301.4	——	——	——	Cairo and Fulton	.....	.....	.....	.....	.....	.....	.....	——	——	——	——	——	----
30 Nov. '58	38.5	——	----	107.5	...	...	.....	Memphis and Little Rock	553,877	*	——	351,524	446,000	10,725	811,949	——	——	——	——	——	----
								CALIFORNIA.													
30 Sep. '58	22.5	——	----	41.8	...	...	.....	Sacramento Valley	1,547,100	*	——	791,100	756,000	——	1,547,100	22.5	.....	185,108	102,726	.....	----
								CONNECTICUT.													
31 Jan. '59	23.9	——	----	——	3	6	30	Danbury and Norwalk	333,237	49,773	——	279,050	85,000	3,502	404,622	23.9	.....	56,044	20,618	6	----
30 Sep. '58	122.4	——	----	75.1	16	28	238	Hartford, Provid. and Fishkill	3,903,455	302,511	——	1,936,740	1,862,730	319,962	4,308,307	122.4	.....	273,428	163,615	——	----
31 Aug. '59	61.4	10.6	----	——	——	——	——	Hartford and New Haven	3,108,018	254,000	102,889	2,350,000	964,000	16,463	3,932,432	72.0	314,763	723,460	204,134	10	124
31 Dec. '58	74.0	——	----	——	11	19	212	Housatonic	2,438,847	*	8,559	2,000,000	278,500	76,675	2,555,837	159.0	.....	271,273	66,330	——	----
31 Dec. '58	57.0	——	----	——	7	15	178	Naugatuck	1,578,301	*		1,031,800	437,550	30,713	1,706,802	57.0	.....	199,536	314,068	——	----
30 Nov. '58	62.3	——	----	——	——	——	——	N. Haven, N. London and Ston.	1,470,661	*	11,050	738,538	750,000	.....	1,488,538	50.1	.....	76,758	8,946	——	----
31 Dec. '58	46.4	8.8	----	——	——	——	——	New Haven and Northampton	1,400,000	*		922,500	500,000	.....	1,481,723	55.2	.....	172,369	70,487	5	----
30 Nov. '58	66.0	——	----	——	5	5	167	N.Lond., Willimant. & Palmer	1,561,241	*	5,453	510,900	1,055,600	272	1,575,147	66.0	91,134	104,464	30,512	——	----
31 Mar. '58	62.2	——	63.8	——	29	72	368	New York and New Haven	4,593,698	661,547	——	3,000,000	2,219,002	79,722	5,582,071	74.0	432,024	932,550	231,560	3	----
31 Mar. '58	59.0	7.0	----	——	...	...	.....	Norwich and Worcester	2,245,406	176,792	——	2,522,300	324,130	59,614	2,598,672	66.0	.....	265,417	44,587	——	----
								DELAWARE.													
31 Dec. '58	71.0	——	----	19.4	——	——	——	Delaware	1,146,311	*	——	252,561	735,000	123,750	1,146,311	71.0	.....	66,628	——	——	----
30 Nov. '58	14.3	——	----	——	——	——	——	Newcastle and Frenchtown	699,514	——	25,000	762,320	——	——	767,278	14.3	.....	19,895	——	——	----
								FLORIDA.													
.. .. 59	154.2	——	----	——	...	...	.....	*Florida*	.....	.....	——	.....	.....	.....	.....	——	——	.....	.....	——	----
30 Apr. '58	——	——	----	45.1	...	...	.....	*Florida and Alabama*	292,291	*	——	317,847	154,000	70,620	543,237	——	——	——	——	——	----
30 Jun. '59	31.3	——	2.0	28.6	2	1	24	*Flo., Atlantic and Gulf Central*	396,310	28,608	——	205,781	204,600	164,670	594,836	19.3	.....	10,255	1,504	——	----
.. .. '59	26.5	3.9	----	227.0	...	...	.....	*Pensacola and Georgia*	.....	.....	——	.....	.....	.....	.....	29.4	.....	.....	.....	——	----
								GEORGIA.													
31 July '58	86.7	——	----	——	15	11	105	Atlanta and La Grange	1,179,381	*	——	1,000,000	187,500	23,384	1,459,075	86.7	.....	362,061	197,357	7½	----
.. .. '59	30.0	——	----	133.5	——	——	——	Atlantic and Gulf—M. Trunk	.....	.....	——	.....	.....	.....	.....	30.0	.....	.....	.....	——	----
31 Dec. '57	53.0	——	----	——	——	——	——	Augusta and Savannah	1,032,200	*	——	733,700	298,500	.....	1,032,200	53.0	.....	125,427	69,679	——	----
30 Apr. '59	43.5	——	----	23.7	...	...	.....	Brunswick and Florida	755,000	*	——	151,887	.....	.....	.....	31.0	.....	.....	.....	——	----
30 Nov. '58	191.0	——	----	——	52	28	633	Central of Georgia	3,750,000	*	550,152	3,750,000	199,851	——	5,645,001	229.0	714,787	1,353,722	755,615	10	----
31 Mar. '59	171.0	61.0	----	——	——	——	——	Georgia (and Bank)	4,174,492	*	829,550	4,150,000	373,000	——	7,368,665	232.0	.....	1,154,621	544,363	4	----
31 July '59	102.5	——	----	——	18	16	171	Macon and Western	1,500,000	*	5,073	1,438,800	52,500	——	1,851,721	102.5	.....	325,192	163,124	7½	100
31 July '59	50.0	——	----	——	7	2	107	Muscogee	774,244	162,534	——	669,950	249,000	——	1,026,868	50.0	.....	202,714	110,516	8	----
1 May, '58	68.1	——	----	——	3	4	33	Savannah, Albany and Gulf	1,386,634	52,373	——	1,275,901	10,200	180,621	1,473,140	71.6	.....	.....	.....	——	----
31 July '59	106.1	56.5	14.8	44.3	15	18	166	South Western	3,165,000	*	——	2,254,000	631,000	——	.....	147.2	171,758	547,876	337,769	——	----
30 Sep. '58	138.0	——	----	——	52	24	705	Western and Atlantic	5,901,497	*	——	built and	own'd by	State.	——	138.0	.....	852,139	457,916	——	----
								ILLINOIS.													
.. .. ..	220.0	——	----	——	...	...	.....	Chicago, Alton and St. Louis	10,000,000	.....	.....	3,500,000	4,500,000	.....	10,000,000	220.0	.....	.....	.....	——	----
30 Apr. '59	138.0	——	----	——	62	31	990	Chic., Burlington and Quincy	6,068,054	1,400,872	680,158	4,629,340	2,990,000	.....	8,149,084	210.0	.....	1,044,573	171,515	——	----
31 Dec. '58	45.0	——	----	——	6	14	101	Chicago and Milwaukee	1,799,894	67,869	120,000	988,000	762,865	188,085	2,050,065	45.0	14 mo.	243,282	135,284	——	----
.. .. '58	138.0	——	----	75.0	...	...	.....	Chicago and Northwestern	.....	.....	.....	4,250,000	6,350,000	2,500,000	13,330,000	138.0	.....	.....	.....	——	----
30 Jun. '58	181.8	——	----	——	58	57	960	Chicago and Rock Island	6,776,119	*	175,165	5,603,000	1,397,000	5,651	7,543,104	228.4	.....	1,407,846	629,029	——	62¾
10 Nov. '58	33.2	——	----	——	——	——	——	Fox River Valley	580,000	*			580,000	.....	.....	84.0	.....	.....	.....	——	----
31 Dec. '58	121.0	138.5	73.6	——	60	63	1,369	Galena and Chicago Union	8,027,473	1,311,917	211,003	6,026,400	3,783,015	292,466	10,300,517	326.5	808,231	1,547,561	620,328	4	74½
.. .. '57	175.0	——	----	——	——	——	——	Great Western	5,022,926	*		1,600,000	3,088,426	334,500	5,022,926	175.0	.....	.....	.....	——	----
31 Dec. '58	454.0	250.0	----	——	113	96	2,305	*Illinois Central*	19,674,214	3,347,799	——	10,249,210	20,000,000	1,297,277	31,596,487	704.0	.....	1,976,578	556,624	——	66
.. .. ..	——	——	——	81.5	——	——	——	Illinois River	.....	.....	——	.....	.....	.....	.....	——	——	——	——	——	----
.. .. ..	148.0	——	----	——	...	...	.....	Ohio and Mississippi	4,870,586	*	——	1,780,295	3,292,403	.....	.....	148.0	.....	.....	.....	——	----
.. .. ..	46.6	——	----	——	...	...	.....	Peoria and Bureau Valley	.....	.....	——	.....	600,000	.....	.....	oper	by Chic.	& R. Is.	125,000	——	----
.. .. ..	——	——	——	129.0	——	——	——	Peoria and Hannibal	.....	.....	——	.....	.....	.....	.....	——	——	——	——	——	----
.. .. '58	186.0	——	----	——	...	...	.....	Peoria and Oquawka	5,400,000	*	——	1,569,889	2,200,000	.....	.....	186.0	.....	.....	.....	——	----
31 Dec. '58	100.0	——	----	——	...	...	.....	Quincy and Chicago	1,978,555	*	——	800,000	1,200,000	——	2,000,000	100.0	oper. by	Bur. &	Quincy.	——	----
.. .. ..	1.0	——	----	——	...	...	.....	Rock Island Bridge	.....	.....	——	.....	.....	.....	.....	oper	by Chic.	& R. Is.	.....	——	----
31 Dec. '58	168.5	39.8	12.2	——	31	30	424	Terre Haute, Alton & St. Louis	7,608,958	628,487	——	3,026,903	5,035,615	741,040	8,865,252	208.3	.....	823,767	.....	——	----
								INDIANA.													
.. .. ..	108.0	——	----	——	...	...	.....	Cincinnati and Chicago	2,080,433	*	.....	1,196,679	1,006,125	.....	.....	108.0	.....	.....	.....	——	----
.. .. ..	29.0	——	----	73.0	...	...	.....	Cincinnati, Peru and Chicago	.....	.....	.....	.....	.....	.....	.....	29.0	.....	.....	.....	——	----
31 Aug. '57	109.0	——	----	——	——	——	——	Evansville and Crawfordsville	2,233,413	*	2,750	986,031	1,219,100	51,772	2,283,748	109.0	.....	249,867	119,432	——	----
1 Jan. '58	72.4	——	----	——	19	21	278	Indiana Central	1,666,280	244,081	25,641	611,050	1,166,000	47,850	2,111,050	109.0	.....	368,189	132,094	6	----
31 Dec. '58	89.8	20.2	----	——	23	19	313	Indianapolis and Cincinnati	2,497,952	540,043	25,689	1,689,900	1,362,284	140,689	3,458,108	110.0	.....	448,858	230,834	9	----
31 Dec. '58	84.0	——	----	——	——	——	——	Ind., Pittsburg and Cleveland	1,904,956	*	10,000	835,971	1,025,200	19,719	2,109,336	84.0	.....	232,905	92,859	——	----
31 Aug. '57	78.0	——	----	——	——	——	——	Jeffersonville	1,839,576	*		1,014,252	681,000	99,400	.....	108.0	.....	222,737	74,328	——	----
.. .. '59	64.0	——	----	——	...	...	.....	Lafayette and Indianapolis	1,850,000	*	.....	1,000,000	690,000	.....	2,000,000	64.0	.....	.....	.....	——	----
.. .. '58	86.0	49.0	----	——	...	...	.....	Madison and Indianapolis	2,984,516	*	.....	1,647,700	1,338,816	.....	.....	135.0	.....	206,114	82,632	——	----
.. .. '58	288.0	——	----	——	...	...	.....	New Albany and Salem	6,000,000	*	*	2,800,000	3,000,000	2,000,000	6,000,000	288.0	.....	645,827	371,402	——	----
.. .. '58	74.0	——	----	——	...	...	.....	Peru and Indianapolis	2,000,000	*	*	1,100,000	820,000	80,000	2,000,000	74.0	.....	.....	.....	——	----
30 Nov. '58	73.0	——	----	——	18	25	298	Terre Haute and Richmond	1,611,450	*	26,555	1,376,450	235,000	69,353	1,846,990	73.0	.....	380,274	179,196	10	----
								IOWA.													
1 Jun. '58	75.5	——	----	201.5	...	...	.....	*Burlington and Missouri*	1,514,257	*	——	752,733	665,000	92,663	1,542,768	50.0	.....	.....	.....	——	----
.. .. '59	86.0	——	----	——	...	...	.....	Chicago, Iowa and Nebraska	1,350,000	*	——	516,072	860,000	349,084	.....	86.0	.....	.....	.....	——	----
31 May, '58	50.1	——	----	269.0	8	8	86	Dubuque and Pacific	1,579,988	166,823	——	838,086	965,000	441,787	2,267,313	50.1	.....	.....	.....	——	----
.. .. ..	——	——	——	438.0	——	——	——	Iowa Central Air Line	.....	.....	——	245,000	755,000	.....	.....	——	——	——	——	——	----
1 Jun. '58	38.5	——	----	101.3	4	4	64	Keok., Ft. Desmoines & Minn.	1,037,876	82,499	——	921,449	570,000	.....	.....	38.5	.....	57,395	21,356	——	----
1 Jun. '59	11.2	——	----	57.3	...	...	.....	Keok., Mt. Pleasant and Musc.	745,703	*	——	548,216	414,000	60,452	1,022,608	11.2	.....	.....	.....	——	----
.. .. '59	55.0	52.6	----	312.0	...	...	.....	Mississippi and Missouri	4,198,000	*	——	.....	.....	.....	.....	107.6	.....	.....	.....	——	----
								KENTUCKY.													
31 Oct. '58	80.0	——	----	——	...	...	.....	Covington and Lexington	3,730,998	404,973	.....	1,385,850	2,930,000	189,192	.....	111.8	.....	426,408	{220,906	——	----
30 Jun. '57	20.0	——	----	113.0	...	...	.....	Lexington and Big Sandy	694,024	*	——	sold,1859,	for $26,0	00.	.....	20.0	.....	.....	.....	——	----
.. .. '58	13.0	——	----	22.0	...	...	.....	Lexington and Danville	765,500	——	——	694,444	71,000	.....	.....	13.0	oper.by	Cov. &	Lex.	——	----
30 Jun. '59	29.0	——	----	——	...	...	.....	Lexington and Frankfort	590,401	52,300	——	514,409	130,000	67,913	712,322	29.0	.....	120,187	64,142	——	----
30 Jun. '59	65.1	——	----	——	...	...	.....	Louisville and Frankfort	1,502,094	26,820	——	741,069	469,519	8,097	1,623,088	65.1	.....	268,046	113,948	——	----
1 Oct. '58	99.0	87.5	----	85.0	10	9	135	Louisville and Nashville	3,580,826	254,154	——	2,151,430	2,300,000	320,132	4,890,700	60.0	.....	163,288	94,995	——	----
.. .. '59	18.8	——	----	70.2	——	——	.....	Maysville and Lexington	.....	.....	——	.....	.....	.....	.....	18.8	oper.by	Cov. &	Lex.	——	----
								LOUISIANA.													
.. .. ..	22.0	——	----	——	...	...	.....	Clinton and Port Hudson	750,666	*	——	.....	.....	.....	.....	22.0	.....	.....	.....	——	----
.. .. ..	27.0	——	----	——	...	...	.....	Mexican Gulf	662,911	*	——	.....	.....	.....	.....	27.0	.....	.....	.....	——	----
31 Dec. '58	80.0	——	----	178.0	...	...	.....	*N. O. Opelousas and Gr. West'n*	3,382,948	362,291	——	1,002,959	2,121,000	549,997	4,529,986	80.0	.....	225,577	.....	——	----
30 Mar. '58	206.0	——	----	206.0	...	...	.....	*N. O. Jackson and Gr. Northern*	6,064,455	458,688	——	4,320,618	1,727,000	1,182,474	7,521,183	206.0	.....	298,529	.....	——	----
31 Aug. '58	21.0	——	----	168.0	...	...	.....	*Vicksburg, Shreveport & Texas*	929,418	*	——	882,022	58,744	50,384	992,050	21.0	.....	.....	.....	——	----

RAILROAD SHARE LIST, including Mileage, Rolling Stock, etc., etc.

An *asterisk* (*) occurring in the column headed "Rolling-Stock," signifies that the cost is included in that of "Railroad and Appurtenances." A *dash* (—) signifies "nil." Running *dots* (.....) signify "not ascertained." Land-Grant Railroads are in *"italics."*

Years ending.	Railroad. Main Line.	Railroad. Lateral and Branch Lines.	Railroad. 2nd Track and Sidelings.	Road in progress or projected.	Equipment. Engines.	Equipment. Cars. Passenger.	Equipment. Cars. Freight, etc.	Companies.	Abstract of Balance Sheet. Property and Assets. Railroad and Appurtenances.	Property and Assets. Rolling-Stock.	Property and Assets. Invested in other works.	Liabilities. Share Capital paid in.	Liabilities. Bonded and Mortgage Debt.	Liabilities. Floating Debt.	Liabilities. Balance Total, incl. all other assets and liabilities.	Road operated, incl. road leased, etc.	Mileage run by locomotives with trains.	Earnings. Gross.	Earnings. Net.	Dividends.	Price of shares.
	M.	M.	M.	M.	No	No	No.		$	$	$	$	$	$	$	M.	M.	$	$	p. c.	p. c.
								MAINE.													
31 Dec. '58	32.0	—	.....	6.0	4	—	25	Androscoggin	645,271	*		145,787	511,500	.....	.....	32.0	.....	30,957	17,263	—	.....
31 May, '59	55.0	—	.....	—	9	10	128	Androscoggin and Kennebec	2,210,947	*	27,925	457,900	1,748,457	101,209	2,307,566	137.0	.....	281,929	89,766	—	.....
30 Jun. '59	149.0	—	25.0	—	41	17	349	Atlantic and St. Lawrence	6,066,375	857,566	—	2,494,900	3,472,000	9,572	5,976,472	149.0	429.791	545,741	150,226	6	.....
31 Dec. '58	12.5	—	.....	—	4	2	45	Bangor, Oldtown and Milford	175,232	*	—	135,000	—	.....	175,516	12.5	.....	33,059	16,530	—	.....
31 Dec. '58	63.0	9.0	.....	—	12	11	109	Kennebec and Portland	2,871,264	*	—	1,107,526	1,763,738	.....	.....	72.5	.....	145,074	70,746	—	.....
31 Dec. '58	—	—	—	23.0	...	...	...	Penobscot	308,413	—	—	180,000	143,678	.....	.....	...	.....	.....	.....	—	.....
31 May, '59	54.7	—	.....	—	4	10	93	Penobscot and Kennebec	1,611,413	104,019	78,014	555,228	1,206,800	128,576	1,890,604	54.7	oper. by	An. & K.	67,324	—	.....
31 Dec. '58	51.3	—	.....	—	11	13	118	Portland, Saco and Portsmouth	1,494,792	*	5,208	1,500,000	—	—	1,500,000	51.3	.....	211,997	101,144	6	.....
31 May, '59	37.0	—	.....	—	...	...	...	Somerset and Kennebec	783,763	*	—	169,200	556,600	.....	.....	37.0	.....	55,403	28,404	—	.....
31 May, '59	18.5	—	.....	33.5	...	...	...	York and Cumberland	1,090,000	*	—	370,000	450,000	270,000	1,090,000	18.5	.....	.....	.....	—	.....
								MARYLAND.													
30 Sep. '58	279.6	7.2	.....	—	228	87	3,489	Baltimore and Ohio	20,019,286	3,538,360	2,961,982	13,111,500	10,668,645	412,483	29,400,161	286.8	3,626,805	3,856,485	1,325,280	—	57
31 Sep. '58	30.0	—	.....	—	7	33	167	Washington Branch	1,650,000	*	—	1,650,000	—	—	1,824,806	39.0	187,427	469,423	266,969	6	.....
31 Dec. '58	138.0	4.0	.....	—	42	38	1,455	Northern Central	6,843,457	733,934	220,965	2,260,000	5,395,800	655,507	8,681,557	154.5	606,482	810,604	364,649	—	20
								MASSACHUSETTS.													
30 Nov. '58	21.2	—	.....	—	6	4	80	Berkshire	600,000	*	—	600,000	—	—	600,000	ope	rat. by	Housat.	42,000	7	.....
30 Nov. '58	26.8	1.8	43.6	—	20	26	544	Boston and Lowell	2,239,253	183,345	—	1,830,700	440,000	21,965	2,619,210	28.6	274,655	407,399	166,109	6	99
31 May, '59	74.3	7.4	50.8	—	30	39	540	Boston and Maine	3,847,004	368,357	105,937	4,076,570	—	—	—	81.7	.....	818,681	399,657	7½	104
31 Dec. '57	74.5	—	2.1	—	...	...	...	Boston and New York Central	3,622,203	69,941	—	2,241,000	374,550	1,299,039	3,923,319	74.5	.....	88,483	7,052	—	.....
30 Nov. '58	43.5	12.0	22.8	—	22	27	200	Boston and Providence	3,333,807	191,175	—	3,160,000	195,220	—	3,862,710	55.5	292,649	527,764	259,176	6	102
30 Nov. '58	44.7	24.0	59.2	—	31	64	697	Boston and Worcester	4,251,682	437,416	100,000	4,500,000	500,000	60,774	5,578,160	68.7	498,325	923,223	332,270	6	99
30 Nov. '58	46.1	1.1	2.7	—	7	10	109	Cape Cod Branch	907,761	123,864	—	681,689	144,600	114,417	.....	47.2	78,282	106,846	49,483	—	.....
30 Nov. '58	50.0	2.4	8.9	—	12	13	330	Connecticut River	1,614,364	187,558	20,000	1,591,100	223,000	28,000	.....	75.4	158,815	238,390	90,877	2	.....
31 May, '59	44.2	36.4	19.4	—	28	46	320	Eastern	4,134,475	456,523	262,102	2,853,400	2,105,500	172,218	5,128,719	97.4	373,641	663,135	319,526	—	56
30 Nov. '58	19.9	1.3	2.8	—	—	—	—	Essex	742,592	4,416	—	299,107	277,961	197,423	774,492	ope	rat. by	Eastern	12,295	—	99
30 Nov. '58	50.9	16.8	70.1	—	29	28	643	Fitchburg	3,189,851	350,149	—	3,540,000	—	131,453	3,863,710	67.7	303,392	572,967	278,855	6	.....
30 Nov. '58	14.0	—	2.4	—	3	3	45	Fitchburg and Worcester	293,658	40,226	—	210,000	64,200	65,735	.....	26.0	35,557	35,476	12,849	6	.....
30 Nov. '58	9.0	—	9.0	—	—	—	—	Grand Junction (Boston)	.....	.....	.....	.....	.....	.....	.....	9.0	.....	.....	.....	—	.....
30 Nov. '58	24.9	—	2.0	—	—	—	—	Hampshire and Hampden	598,299	—	—	292,651	200,000	105,649	.....	ope	r. by N.	H. & N'h	23,294	—	.....
30 Nov. '58	12.4	—	2.3	—	2	3	28	Lowell and Lawrence	332,883	30,275	—	200,000	100,000	—	.....	12.4	22,455	42,784	18,540	3	.....
30 Nov. '58	14.6	—	17.1	—	12	11	301	Nashua and Lowell	558,919	95,684	—	600,000	—	—	.....	14.6	123,395	180,085	71,505	8	.....
30 Nov. '58	20.1	1.4	1.1	—	7	18	144	New Bedford and Taunton	493,059	51,906	—	500,000	—	12,600	.....	21.5	52,220	137,914	28,968	—	.....
30 Nov. '58	26.9	—	2.4	—	5	9	43	Newburyport	570,086	59,096	—	220,240	198,520	221,335	.....	36.0	70,236	44,974	9,257	—	.....
30 Nov. '58	8.6	—	0.4	23.4	—	—	—	N. York and Boston Air Line	416,133	—	—	223,176	673,210	4,643	.....	8.6	18,093	16,606	1,647	—	.....
30 Nov. '58	79.5	7.8	25.1	—	25	46	359	Old Colony and Fall River	3,028,445	334,503	—	3,015,100	161,500	30,935	3,748,970	87.3	365,197	551,399	257,060	6	106
30 Nov. '58	18.6	—	0.8	—	1	2	1	Pittsfield and North Adams	432,430	11,247	—	450,000	—	—	450,000	ope	r. by We	stern.	27,000	6	.....
30 Nov. '58	43.4	—	14.9	—	12	18	374	Providence and Worcester	1,534,911	254,565	—	1,550,000	300,000	46,500	1,897,369	43.4	199,895	270,402	110,344	6	.....
30 Nov. '58	16.9	—	1.7	—	3	3	198	Salem and Lowell	366,987	82,543	—	243,305	226,900	—	.....	16.9	29,822	50,856	—	—	.....
30 Nov. '58	21.9	—	.....	—	—	—	—	Stockbridge and Pittsfield	444,600	4,100	—	448,700	—	—	450,000	ope	r. by Ho	usaton.	31,409	7	.....
30 Nov. '58	7.1	—	.....	35.5	—	—	—	Troy and Greenfield	329,741	—	—	288,428	169,000	9,854	.....	—	—	—	—	—	.....
30 Nov. '58	69.0	8.0	5.5	—	12	8	194	Vermont and Massachusetts	3,309,287	207,343	—	2,214,225	1,003,675	6,500	.....	77.0	99,256	225,079	105,037	—	11
30 Nov. '58	173.4	—	94.3	—	72	47	1,149	Western (incl. Alb. & W.S. etc.)	9,785,569	1,095,713	15,120	5,150,000	6,032,520	243,800	13,528,766	192.0	994,951	1,700,293	809,363	8	108
30 Nov. '58	45.7	—	8.8	—	10	8	145	Worcester and Nashua	1,279,936	140,961	—	1,141,000	200,000	31,210	1,416,555	45.7	152,803	185,127	83,849	5¼	.....
								MICHIGAN.													
1 Jun. '59	17.3	—	.....	2.7	2	1	100	*Bay de Noquet and Marquette*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....
30 Sep. '59	57.0	—	.....	—	—	—	—	Chic. Detroit & Can. G.T. Junc.	built and	equipped by G		r. Tr'k R.	R. Co. of	Canada	.....	.....	.....	.....	.....	—	.....
1 Jun. '59	188.0	—	.....	—	...	...	...	*Detroit and Milwaukee*	6,738,593	369,552	—	2,329,155	4,707,500	.....	9,008,369	188.0	.....	365,038	144,270	—	.....
.. .. ..	—	—	—	—	...	...	...	*Flint and Pere Marquette*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....
.. .. ..	—	—	—	183.0	...	...	...	*Grand Rapids and Indiana*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....
31 May, '59	284.0	—	.....	—	98	123	1,528	Michigan Central	12,847,238	*	1,149,069	6,057,840	8,284,063	119,089	14,548,411	329.0	.....	2,417,915	886,697	—	40
1 Mar. '59	246.0	293.0	.....	—	91	135	976	Mich. S'th'n & N'th'n Indiana	14,517,892	1,607,906	1,312,534	8,975,400	9,343,000	816,460	19,595,407	539.0	.....	2,019,425	777,273	—	6
.. .. ..	—	—	—	89.8	—	—	—	*Port Huron and Milwaukee*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....
								MINNESOTA.													
.. .. '59	—	—	—	620.0	—	—	—	*Minnesota and Pacific*	.....	.....	.....	.....	600,000	.....	.....	.....	.....	.....	.....	—	.....
.. .. '59	—	—	—	175.0	—	—	—	*Southern Minnesota*	.....	.....	.....	.....	375,000	.....	.....	.....	.....	.....	.....	—	.....
.. .. '59	—	—	—	112.5	—	—	—	*Minneapolis and Cedar Rapids*	.....	.....	.....	.....	600,000	191,130	.....	.....	.....	.....	.....	—	.....
.. .. '59	—	—	—	200.0	—	—	—	*Minnesota Transit*	.....	.....	.....	.....	500,000	.....	.....	.....	.....	.....	.....	—	.....
.. .. '59	—	—	—	60.0	—	—	—	*Root River Valley*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....
								MISSISSIPPI.													
1 May, '59	146.5	—	.....	41.7	11	6	155	*Mississippi Central*	3,395,965	*	—	1,641,947	1,346,363	383,129	3,717,469	146.5	.....	239,585	117,371	—	.....
1 Oct. '58	59.7	—	.....	39.5	5	2	129	*Mississippi and Tennessee*	1,038,499	135,799	—	757,540	471,799	170,623	1,399,962	59.7	.....	161,001	99,838	—	.....
31 Dec. '58	83.2	—	.....	60.4	...	...	...	*Southern Mississippi*	2,750,000	*	—	1,000,000	1,400,000	.....	.....	83.2	.....	250,047	121,659	—	.....
								MISSOURI.													
30 Nov. '58	12.0	—	.....	65.8	1	...	.....	*Cairo and Fulton*	281,645	9,200	—	50,493	327,000	50,892	128,386	12.0	.....	.....	.....	—	.....
1 July '58	171.0	—	.....	36.0	...	...	.....	*Hannibal and St. Joseph*	8,164,559	330,422	—	1,664,773	6,830,500	37,500	8,533,228	171.0	.....	.....	.....	—	.....
31 Oct. '58	168.8	—	.....	68.0	...	...	.....	*North Missouri*	5,396,527	235,994	—	2,620,000	3,250,000	48,006	6,018,106	168.0	.....	256,159	.....	—	.....
.. .. ..	—	—	—	.....	...	...	...	*Platte County*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....
28 Feb. '59	163.0	19.0	.....	119.0	26	26	412	*Pacific*	8,621,659	614,782	—	3,330,657	8,203,000	754,837	12,288,494	182.0	.....	676,310	301,503	—	.....
31 Oct. '58	19.0	—	.....	264.0	—	—	—	*South-Western Branch*	1,226,010	—	—	66,974	1,400,000	.....	.....	—	—	—	—	—	.....
31 Oct. '58	86.5	—	.....	—	...	...	.....	*St. Louis and Iron Mountain*	4,916,189	283,869	—	1,999,300	3,276,000	171,103	5,446,403	86.5	.....	152,371	—	—	.....
								NEW HAMPSHIRE.													
31 Mar. '59	23.1	—	.....	—	—	—	—	Ashuelot	505,500	—	—	245,518	150,000	109,982	505,500	ope	r. by Con	n. River	30,000	—	.....
31 Mar. '59	93.0	—	.....	—	—	—	—	Boston, Concord and Montreal	2,580,134	283,450	8,219	1,800,000	1,050,000	165,883	3,015,880	93.0	.....	227,720	86,338	—	.....
30 Nov. '58	53.6	—	8.2	—	18	11	545	Cheshire	2,758,565	322,266	—	2,085,925	784,900	121,500	.....	53.6	248,469	297,382	48,640	—	.....
30 Nov. '58	28.5	—	.....	8.5	...	...	.....	Cocheco	769,433	81,025	—	399,140	421,120	46,399	.....	28.5	.....	44,709	17,065	—	.....
31 Mar. '59	34.5	—	.....	—	—	—	—	Concord	1,500,000	*	57,513	1,500,000	—	66,506	1,564,506	34.5	.....	459,659	128,366	8	56
30 Sep. '58	46.8	—	.....	—	—	—	—	Concord and Portsmouth	250,000	*	—	250,000	—	—	250,000	ope	r. by Con	cord.	15,000	—	.....
30 Nov. '58	14.6	—	.....	—	—	—	—	Contoocook Valley	200,000	—	—	200,000	—	—	200,000	14.6	.....	16,603	1,528	—	.....
30 Nov. '58	16.8	—	.....	—	—	—	—	Eastern	525,205	—	—	—	—	—	—	ope	r. by Eas	tern Ma	ss.	—	.....
1 Sep. '58	20.5	—	.....	25.8	...	...	.....	Great Falls and Conway	433,404	40,887	—	166,748	209,927	42,219	477,476	20.5	.....	24,027	12,450	—	.....
30 Nov. '58	26.8	—	.....	—	—	—	—	Manchester and Lawrence	.....	.....	.....	.....	38,800	.....	.....	ope	r. by Con	cord.	.....	6	82
31 Mar. '58	53.8	—	.....	—	—	—	—	Merrimac and Conn. Rivers	1,281,504	*	—	595,587	383,400	303,393	1,282,380	53.8	.....	59,774	21,156	—	.....
31 Mar. '59	69.2	12.8	.....	—	22	22	372	Northern New Hampshire	3,343,167	*	33,750	3,068,400	486,046	25,800	3,580,246	82.0	.....	353,101	187,136	5	49
30 Nov. '58	24.7	—	.....	—	...	...	.....	Sullivan	847,032	78,832	—	500,000	750,000	205,204	1,455,204	24.7	.....	63,874	19,897	—	.....
								NEW JERSEY.													
30 Nov. '58	64.2	—	.....	—	...	...	.....	Belvidere Delaware	3,173,285	*	—	1,100,000	2,036,000	.....	.....	64.2	.....	224,308	93,083	—	.....
30 Nov. '58	63.9	32.3	.....	8.0	...	...	.....	Camden and Amboy	5,376,795	*	5,972,076	3,798,400	8,567,800	.....	11,440,489	96.2	.....	1,640,328	768,160	8	.....
30 Nov. '58	60.2	—	.....	—	...	...	.....	Camden and Atlantic	1,787,970	*	—	656,635	1,006,800	56,667	1,787,470	60.2	.....	133,222	57,965	—	.....
1 Apr. '59	64.0	—	.....	—	30	21	256	Central of New Jersey	5,042,163	424,700	—	2,200,000	3,186,000	175,000	5,580,981	64.0	488,871	870,954	520,672	10	.....
.. .. '59	—	—	—	2.6	—	—	—	Long Dock	1,000,000	—	—	—	1,000,000	.....	.....	—	—	—	—	—	—	.....
31 May, '59	53.0	—	.....	45.5	11	15	91	Morris and Essex	1,613,361	*	57,000	1,157,805	340,000	262,738	1,760,562	53.0	.....	239,179	110,040	3	.....
31 May, '59	33.8	—	.....	—	—	—	—	New Jersey	8,226,532	313,295	—	3,749,000	711,420	342,297	4,802,717	33.8	398,784	903,458	554,087	10	.....
31 May, '59	21.3	—	.....	—	2	6	17	Northern New Jersey	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....
30 Nov. '58	13.5	—	.....	—	—	—	—	Paterson and Hudson	630,000	—	—	630,000	—	—	630,000	ope	r. by N.	Y. & E.	53,400	4	.....
30 Nov. '58	15.0	—	.....	—	—	—	—	Paterson and Ramapo	350,000	—	—	248,225	100,000	12,000	350,000	ope	r. by N.	Y. & E.	26,500	5½	.....
30 Nov. '58	18.7	—	.....	—	—	—	—	Warren	1,568,713	*	—	968,000	600,000	439,085	1,607,085	18.7	.....	193,241	96,620	5¼	.....
30 Nov. '58	13.0	—	.....	47.0	—	—	—	West Jersey	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	—	.....

Railroad Earnings.

The business of the Cincinnati, Wilmington and Zanesville Railroad for September was as follows:

Passenger earnings	$14,666 18
Freight "	7,358 10
	$22,024 28
The expense of operating, repairing and improving the road was	13,177 18
Leaving	$8,847 10
The receipts from all sources were	$21,219 50
And the disbursements	14,955 78
Leaving	$6,263 72
The debts and liabilities contracted by Receivers and remaining unsatisfied on the 30th of September, were	$29,916 90
Debts and liabilities due the road which have accrued during the present Receivership and remaining uncollected Sept. 30, were	$27,958 89

The receipts of the Grand Trunk Railway of Canada for the week ending October 15, were $60,032 46
Week ending Oct. 16, 1858 52,975 21
Increase $7,057 24
Total traffic from July 1st $725,350 97
Same period last year 653,091 55
Increase $72,259 42

The traffic of the Great Western Railway of Canada for the week ending Oct. 21, 1859, was as follows:

Passengers	$27,405 63
Freight and live stock	19,946 71
Mails and sundries	1,630 46
Total	$48,982 81
Corresponding week of last year	47,117 14

The earnings of the New Albany and Salem Railroad in September were $51,860 60
Expenditures 47,890 25
Net earnings $3,970 35

The business of the Pennsylvania Central Railroad shows an increase over last year as follows:

First nine months of 1859	$3,996,891 06
Do. do. 1858	3,871,292 69
Increase in 1859	$125,598 37

Death of Robert Stephenson, the Eminent Engineer.

(*From the London Times, Oct.* 13.)

The death of Stephenson comes with startling rapidity upon that of Brunel. Both men of rare genius, and both occupying a sort of double throne at the head of their profession, they have gone to their rest together, and their rivalry has ceased. Distinguished sons of distinguished fathers, the two men who in these latter years have done most to perfect the art of travel, and in this way to cultivate social intercourse, multiply wealth and advance civilization, have been struck down at one fell swoop in all the maturity of their power. Mr. Stephenson's health had been delicate for about two years, and he complained of failing strength just before his last journey to Norway. In Norway he became very unwell; his liver was so much affected that he hurried home, and when he arrived at Lowestoft he was so weak that he had to be carried from his yacht to the railway, and thence to his residence in Gloucester Square, where his malady grew so rapidly as to leave from the first but the faint hopes of his recovery. He had not strength enough to resist the disease, and he gradually sunk until at length he expired yesterday morning. If his loss will be felt severely in his profession, it will be still more poignantly felt in his large circle of friends and acquaintances, for he was as good as he was great, and the man was even more to be admired than the engineer. His benevolence was unbounded, and every year he expended thousands in doing good unseen. His chief care in this way was for the children of old friends who had been kind to him in early life, sending them to the best schools and providing for them with characteristic generosity. His own pupils regarded him with a sort of worship, and the number of men belonging to the Stephenson school who have taken very high rank in their peculiar walk shows how successful he was in his system of training, and how strong was the force of his example. The feeling of his friends and associates was not less warm. A man of the soundest judgment and the strictest probity, with a noble heart and most genial manner, he won the confidence of all who knew him, and perhaps in all London there were not more pleasant social gatherings than those which were to be found in his house in Gloucester Square, he himself being the life of the party. Without a spark of professional jealousy in his own nature, he was liked by all his fellow engineers, if they did not know him sufficiently to bear him affection; and we do not believe that even those who had the most reason to wish him out of the way, such as the promoters of the Suez Canal, which he strenuously opposed, ever bore him any ill will. He has passed away, if not very full of years, yet very full of honors—the creator of public works, a benefactor of his race, the idol of his friends.

American Railroad Journal.

Saturday, November 5, 1859.

Hartford, Providence and Fishkill Railroad.

The annual report of the Trustees and Directors of this company for the fiscal year ending Sept. 30th, show the gross earnings to have been $333,500; expenses, $180,720; leaving net, $152,777, which is $11,752 increase over the previous year. The amount necessary to meet the interest for one year on all the bonds, including those claimed to be held as collateral, is $143,850, which sum deducted from the net earnings ($152,777) leaves a surplus for the year of $8,927. The receipts and expenses for operating the road from Febr'y, 1, 1858, when it came into the hands of the Trustees, to September 30, 1859, a period of twenty months, have been as follows:—

RECEIPTS.

From passengers		$286,741 78
From freight		224,259 33
From mails, express, rents, etc.		24,002 80
		$535,003 91

EXPENSES.

Repairs of road	$69,337 78	
Do. rolling stock	40,556 67	
Do. bridges, fences, etc.	17,484 42	
Salaries and labor	90,898 09	
Fuel and oil	46,307 92	
Miscellaneous	25,425 94	
		290,012 82
Net earnings from operating road		$244,993 09
Less bonds redeemed	$52,230 00	
" interest paid	133,059 18	
		185,285 18
		$59,708 91
Deduct interest accrued from July 1, 1859, to October 1, 1859, on bonds sold		31,875 00
Estimated surplus on hand, Sept. 30, 1859		$27,828 91

This sum represents the profits of the road under the management of the Trustees, which has been very satisfactory, and the results of which afford a prospect that the interest on all bonds will be regularly and punctually paid, and means gradually secured to pay off the back interest ere long.

There are now due and unpaid interest coupons to the amount of $123,934, which will be paid as soon as there is a sufficient surplus on hand for the purpose. Bonds amounting to $52,230 were paid at maturity, July 1, 1859, leaving but two classes of bonds now outstanding, viz., those secured by a mortgage of the road located in the State of Connecticut, together with the entire equipment, materials and supplies of the road; and those issued to the city of Providence, secured by a mortgage of the entire road located in the State of Rhode Island.

Nothing has been added to construction account since the road passed into the hands of the Trustees, all payments, excepting interest on bonds, having been charged directly to operating expenses.

The equipment of the road consists of 16 locomotives; 20 passenger, 9 baggage, 201 box and flat cars, and about 40 small gravel cars.

Nearly 40,000 new sleepers have been laid, equal to 17 miles of track, and 1,200 rails, equal to two miles, thoroughly repaired, at a cost of over $17,000. Taken as a whole, the value of the road and property has rather increased than diminished.

The result of the year's business proves, that if well and economically managed, the road will pay punctually the interest on all its bonds, accumulate a fund to pay off the back interest at no distant day, and eventually relieve itself of its embarrassments, and yet prove itself of value to the stockholders.

The general statement of the affairs of the company, on the 1st of October, 1859, is as follows:

Stock		$1,537,939 39
Preferred stock issued	$500,000 00	
Preferred stock claimed to be hypothecated	101,200 00	
		398,800 00
Bonds issued	$2,055,500 00	
Of which are claimed to be hypothecated.	245,000 00	
		1,810,500 00
Notes and accounts payable		319,443 62
Premium and interest received on bonds sold, issued by cities of Hartford and Providence		100,324 84
Profit and loss		104,684 35
Canceled bonds paid by Trustees		52,230 00
Total		$4,323,922 79
Cost of road		$3,903,455 56
Equipment		302,510 93
Materials and supplies delivered Trustees		29,348 20
Sink'g Fund City of Hartford	$37,088 00	
Sink'g Fund City of Providence	26,913 92	
		*64,001 92
Sundry notes and accounts		17,227 93
Cash on hand and in dispute, in American Bank, Providence		7,378 25
Total		$4,323,922 79

The officers are:—

JAMES G. ANTHONY, *President.*
G. M. BRIDGEMAN, *Treasurer.*
SAMUEL NOTT, *Superintendent.*

* This fund is deposited with the Trustees of the two cities, to provide for the payment of the company's bonds for $1,000,000, maturing in 1876, now held by the cities of Hartford and Providence.

Tennessee and Coosa Railroad.

The southern terminus of this road is at Gadsden, on the Coosa river; the northern terminus at Guntersville, on the Tennessee river. It is 36½ miles in length, of which 23 miles are graded. The remaining 13½ miles, including the ascent and descent of Sand Mountain, is under construction, and the work being vigorously prosecuted, with a force of 300 men. From the heavy character of the work, at least two years will be required to complete the graduation. When built, it will form a link in the great chain of railroads from the waters of the Mobile Bay to the Tennessee river, and from thence to the valley of the Ohio. At Gadsden, it connects with the Alabama and Tennessee River Railroad, running thence to Selma, at which point connection is made with Mobile, at present by the Alabama river, but will ultimately be made by the Selma and Gulf Railroad.

From Guntersville, a connection will be made north with the Winchester and Alabama Railroad to Winchester, and from which point, *via* Nashville, to the Ohio river.

The estimated cost of the road, in running order, from Gadsden to Guntersville, is $718,000, or $19,672 per mile.

The resources of the company are:

Individual subscriptions	$51,000
Appropriation by State of a portion of 3 per cent. fund in 1849-50	54,421
Appropriations of 1853-4	250,000
Appropriations same date of the accumulations of 2 and 3 per cent. fund	250,000
Lands donated by Congress of United States, 50,000 acres	100,000
Total resources	$705,421

The lands are estimated at a low figure, and it is believed that by the time they are put in market a sufficient sum will be realized to leave a surplus in the Treasury.

The officers of the road are:

S. K. Rayburn, *President.*
G. H. Arms, *Chief Engineer.*
J. H. Moore, *Treasurer.*
G. Greenwood, *Secretary.*

Discovery of Iron in Texas.

The New Orleans *Bulletin* says: "A discovery of great importance has just been made by the State Geologist in Texas. It is no less than the discovery of vast bodies of iron ore, as well as tertiary coal or lignite, beds of limestone, pipe, clay, fire rock and hydraulic limestone in the region of country immediately south of Harrison county in which Marshall is situated, and between that and the point or points on the Sabine river at which the Houston and New Orleans Railroad and the Opelousas Railroad will reach that river. The Geologist commenced in Travis county, which contains Austin, the capital of the State, and proceeded nearly east through Harris county (Houston) to the Sabine, and thence up towards Marshall. But a small portion of the State has therefore yet been explored, yet the discoveries already made are of great importance, not only to Texas, but to Louisiana, and especially to New Orleans. It must have a direct and powerful bearing upon the construction of the Opelousas Railroad, and the road to connect this city with Houston as well as the Southern Pacific Railroad. No doubt exists whatever that valuable ores will also be found in other parts of the State. Indeed, they are known already to exist, and the particulars will be given as soon as the Geologist can extend his explorations.

☞ A suit against the Cleveland, Columbus and Cincinnati, Cleveland and Toledo, and Cleveland and Pittsburg Railroad Companies, for about eight acres of ground in the city of Cleveland, occupied by the depot of said companies, is now on trial in the United States Court in Cincinnati. The suit is brought by the heirs of the original Connecticut Reserve, and involves property estimated at $1,000,000.

Finances of Georgia.

From the report of the Comptroller General of this State for the fiscal year ending Oct. 20, 1859, we learn that the available balance in the State Treasury at the close of the fiscal year 1858, was $130,354 65. The receipts into the Treasury during the year 1859 were $1,032,879 27; and the disbursements, $874,465 92—leaving an available balance in the Treasury on the 21st ult., of $288,768, to meet the balance unpaid on the appropriations for 1859, amounting to $258,432 10. In addition to which there is an *un*-available balance in the treasury of $325,564, consisting of bank stock, $290,900, stock in Milledgeville and Gordon Railroad, $20,000, and Darien Bank bills, Western and Atlantic Railroad scrip, and uncurrent funds, $14,664. The last three items are pronounced utterly worthless, while the two former, public property, cannot be converted into cash being without legislature action. It is recommended by the Comptroller that hereafter these unavailable items be omitted altogether from future reports, or given under the head of "assets belonging to the State"—in order that the true cash condition of the treasury may be the more readily understood, while the total assets belonging to the State can be seen with equal facility.

The estimated receipts into the treasury during the current fiscal year is $903,305 90; and the disbursements, (including $7,000 for the reduction of the public debt, and $50,000 for extraordinary appropriations) $613,700—leaving a surplus of $289,605 90 to apply to a further reduction of the public debt, to education, or to any other purpose the Legislature may direct.

There is still due the Atlantic and Gulf Railroad Co. the sum of $250,000; and the State is bound for a further subscription of $500,000 when the private stockholders raise an additional $600,000. Including these sums, the public debt of the State in bonds amounts to $3,354,750, of which $7,000 only will be due during the current year. The State can, however, if it chooses, force in and redeem $267,500, having, in 1848, reserved to itself the right to redeem certain bonds at any time after 10 years. These bonds are due in 1863 and 1868. Of the bonds issued and unredeemed, $2,080,750 bear 5 per cent., $452,000 7 per cent., and $72,000 5 per cent. interest.

Since the payment of the bonds due the past year, and the redemption of $99,250 of 7 and 6 per cent. bonds due in the years 1860, '61, '62 '63, '64, '65, '68 '69, '70, '71, '72, and '73. The public debt of the State in bonds is as follows:

Due in 1860	7	per cent. Central R. bonds.	$7,000
" 1861	"	" " "	12,000
" 1862	"	" " "	52,000
" 1862	7	do	100,000
" 1862	6	do	20,000
" 1863	"	do	55,000
" 1863	"	do. now redeemable	62,500
" 1865	"	do	25,000
" 1868	"	do. now redeemable	205,000
" 1869	"	do	272 500
" 1869	5	do	72,000
" 1870	6	do	150,250
" 1871	"	do	161,500
" 1872	"	do	625,500
" 1872	7	do. redeemable in 1862	100,000
" 1873	6	do	178,000
" 1874	"	do	80,000
" 1874	7	do	181,500
" 1878	7	do	100,000
" 1879	"	do	150,000
			$2,604,750
Amount subscribed, but not issued			250,000
" pledged conditionally			500,000
Total			$3,354,750

☞ The firm of Decoppet & Co., long and favorably known in Wall street as bankers and brokers, has dissolved, the senior member retiring. The business will be continued under the firm of Weston, Dortic & Co. The members of the new house are Edward Weston, H. Theo. Dortic, Geo. H. Weston, Fred. S. De Billier.

Michigan Southern Railroad.

It will be seen by the following circular that this company are to forego their interest due on the 1st of March next. The announcement creates no surprise, as the event has been expected for a long time, ever since the road has been under its present imbecile and incompetent management.

The next step should be to purchase the mortgages as speedily as possible. The value of the road and its property does not exceed its indebtedness. The sooner therefore it is put on its legs, with no greater loan than it can carry, the better for the public and all parties interested in the road.

The stockholders will not, we presume, feel sufficient interest to take any action whatever. The creditors can, and should, take immediate action to take the road from the hands of its present managers.

The following is the official notice:

Treasurer's Office, New York, Oct. 22, 1859.

To the Bondholders of the Michigan Southern and Northern Indiana Railroad Company:

The directors of the company are compelled to postpone the payment of the interest to fall due on the 1st of November next, upon the bonds of the First Mortgage of the Michigan Southern Railroad Company, and upon the Sinking Fund and Second General Mortgage Bonds, for not exceeding sixty to ninety days from that date. The Treasurer will give due notice of the time when the payment will be made.

The embarrassments of the company have been temporarily accumulated by a serious accident upon the road, and the dissatisfaction of the employees and their consequent proceedings, which have required the payment of large sums for their back wages, and determined the officers of the

company to bring upon the pay rolls, and thereafter to pay them punctually as due. This, and the payment of supply bills, added to the falling off of business the past season, in common with all western roads, has absorbed, and will absorb, the earnings of the company to such an extent as not to leave sufficient means for paying the interest on the 1st of November next.

The directors, however, feel confident that they shall be able to pay the said interest at the above deferred times for payment, and they trust that the holders of the bonds will be satisfied that, in this proceeding, they consult the best interest of all concerned, and will readily consent to the same.

(Signed) WM. WALCOTT, Treasurer.
GEO. BLISS, President.

Interest and Dividends.

The coupons of the bonds of the Memphis and Charleston Railroad, due Nov. 7; the coupons of the bonds of the city of Louisville, issued to the Louisville Water Co., due Nov. 1; and the coupons of the city of Louisville on bonds issued to the Jeffersonville Railroad Co., due Nov. 1, will be paid at the Bank of America.

The second mortgage coupons of the Central Railroad of New Jersey, due Nov. 1, will be paid at the office of the company, 69 Wall street.

The interest on the debt certificates and 6 per cent. bonds of the N. Y. Central Railroad, due Nov. 1, will be paid at the Bank of Commerce.

The coupons of the Huron County (Ohio) Bonds, due Nov. 1, will be paid at the Mercantile Bank.

The Manchester and Lawrence Railroad Company have declared a dividend of 4 per cent., in stock, payable Nov. 1.

The city Treasurer of Boston advertises that holders of city scrip due in January, and Water Loan due in April next, can have their pay at any time, with accrued interest, on presentation.

The interest coupons on the bonds of the Lehigh Valley Railroad Company, due 1st Nov., will be paid at the office of the company in Philadelphia.

The New York and New Haven Railroad has issued a notice to the holders of its bonds due Dec. 1, 1860, offering payment, one-half cash, and the rest in first and only mortgage bonds, due in 1875, upon terms which, it is believed, may be satisfactory to the holders, and which will be stated on application to W. Bement, Esq., the Treasurer.

Holders of the Second Mortgage Bonds of the Cincinnati, Hamilton and Dayton Railroad Company, are requested to present their interest warrents, due in New York on the 1st Nov., 1859, to Frank S. Bond, at 21 Nassau street.

The interest on the bonds of the city of Rock Island, Illinois, issued to the Chicago and Rock Island Railroad, due Nov. 1, 1859, will be paid on presentation of the coupons at the office of Halsted & Gilman, No. 47 Exchange Place.

The Milwaukee and Mississippi Railroad Company are now paying the interest on the first and second mortgage bonds of that road.

The coupons of the second mortgage bonds of the Buffalo, New York and Erie Railroad Company, due Nov. 1st, are paid at the Bank of Commerce.

The coupons of the bonds of the Southern Vermont Railroad Company, maturing Nov. 1, and payable at the Bank of Commerce in this city, under the guarantee of the Troy and Boston Railroad Company, have been promptly paid on presentation.

Holders of coupons in the Mississippi Central Railroad, Nov. 1, are notified to present them for payment to the redemption agent in New York. A. H. Green, 43 Wall street.

RAILROAD SHARE LIST.

We have prepared a full and elaborate *Share List* of American Railroads for the columns of the JOURNAL, embracing about 400 roads. It will contain such information as will enable our readers to form a pretty correct idea of the value and condition of each road. Accompanying it will be a *Bond List*, the whole covering six pages, for which provision will be made by adding eight pages to the reading matter of the JOURNAL. We give this week the first and second pages for the purpose of sending the same to the several companies for verification of our figures, and the necessary additions thereto. Only a few reports contain all the information we desire to give. As soon as the corrections are completed, we shall publish the full list, with the necessary changes, from week to week.

☞ Railroad Companies are respectfully solicited to return to us the additional copy of the JOURNAL sent to them, with our figures properly verified, and the blank spaces filled.

Louisville, New Albany and Chicago R. R.

The name of the railroad heretofore known as the "New Albany and Salem," has been changed by the Directors to that of the "Louisville, New Albany and Chicago Railroad."

The Louisville and Nashville Railroad is now complete, the last rail connecting the two points having been laid on the 25th ult. This will bring to Louisville a large amount of Southern travel, a portion of which, on its way to Chicago and other points North, will pass over the New Albany road. To obtain this, and the more directly to associate in the public mind the close connection of Louisville with the road, this change of name has been made.

Tonica and Petersburg Railroad.

This company was incorporated two years ago. The line is to run from Jacksonville to Tonica, on the Illinois Central Railroad, with the branches thence to Ottawa and Morris, on the Chicago and Rock Island road. At Jacksonville it connects with the Jacksonville and St. Louis Railroad. The Chicago *Press* says that "the road will carry to the Central and to the Rock Island, and also to the Great Western and Peoria and Oquawka roads, large contributions of trade, which now find a most inconvenient and troublesome shipment on the Illinois river, and will open to Chicago and St. Louis the rich agricultural counties of Jersey, Green, Morgan, Cass, Mason, Menard, Tazewell, Woodford and Marshall."

Census of Georgia for 1859.

Accompanying the report of the Comptroller General of this State for the fiscal year just closed, is an abstract of the Census returns of 130 counties in the State for 1859, from which it appears that the total population in these counties is 1,014,418, viz: 571,534 whites, 439,592 slaves, and 4,292 free persons of color—showing an increase since 1852, of 80,256; viz: slaves, 45,487, whites, 31,477, and of free colored persons, 3,292. The remaining two counties are Butts and Montgomery; if these have increased in like ratio, the whole population of the State, according to the Census returns, will be about 1,024,000.

In these counties there are returned 299 deaf and dumb, 400 insane, and 442 idiots. There are also returned 81,719 males, between the ages of 6 and 16; 73,480 females, between 6 and 15; 62,109 males, and 52,895 females, under 6 years of age; 131,592 males over 16, and 138,323 females over 15 years of age. The Comptroller alludes to certain discrepancies in the returns of the Receivers of Tax returns and the Census takers, as to the number of slaves in said counties, and suggests that the Census books be re-added, before an apportionment is made under them by the Legislature.

Wilmington, Charlotte and Rutherford Railroad.

We find in the North Carolina *Whig*, published at Charlotte, N. C., the proceedings of a meeting of the stockholders of this company, held at that place on the 14th ult., at which the annual report was presented and accepted, and a board of directors elected. The *Whig* says:

"We were not present at the meeting, but we understand that the road is progressing finely, some 10 miles of the road being completed and in running order. We believe the whole line is under contract, and we have no doubt the President will use every means to complete it at as early a day as possible."

The following gentlemen were elected directors for the ensuing year, viz: Messrs. Guion, Henderson, Dickson, Davis, Logan, Cole, Steele, Walkup, French, McDowall, Means, Cowan, Van Bockkelin.

At a subsequent meeting of the Directors, H. W. GUION was re-elected President, and JOHN C. MCRAE Chief Engineer.

Don Pedro Segundo Railroad, Brazil.

A letter dated Rio Janeiro, Brazil, August 12. 1859, says:

"The 'Estrada de ferro de Don Pedro Segundo' is the point upon which all eyes in the States are now resting, and upon this railroad I wish to locate you for a few minutes. Mr. Price (an Englishman) built the first section of this road running from Rio Janeiro to a place called Belem (Bethlehem) some forty miles in the interior. This portion of the road is badly constructed, and during the rainy season is entirely useless, as it was nearly all last season. It is, however, now under repair, and as the Brazilian Company have a very active man to superintend the matter. I expect it will do better this season than the last.

"The American Company, who have taken the second section of this road, are doing their best to complete it within a given time; but I fear they have undertaken something beyond their strength. The second section begins at Belem, and runs only seventeen miles further into the country, but this seventeen miles is equal to any fifty miles you can pick out in your State. The road for the first five miles runs like a snake, and forms a perfect W U, and so near is one division to the other, that a stone may be pitched over the intervening distance. After the five miles are passed, the line takes an acute angle for two miles, and ends against a mountain on division seven, now being worked by D. H. Sampon, a thorough railroad man. Division seven is, perhaps, as heavy a one as there is on the line. The first tunnel is about six hundred feet long, the second four hundred and eighty, and the third nearly three hundred feet. After this division is passed you reach another tunnel, on division eight. This division is a very heavy one, but is now nearly finished.

"There are thirteen tunnels on the seventeen miles, the contract taken by the American contractors; the last and the largest tunnel is over one mile long, and is now being worked by Robert Harvey, an old contractor and a member of the company. I hope he may finish the tunnel in time, but I fear he will not. The second tunnel is

located on division fourteen, and is now being worked by E. D. Muhlenberg, of Pennsylvania, who has a large fortune in the division. I know it to be one of the finest divisions on the line.

"W. Milnor Roberts, the President of the company, has arrived with his family. He comes with the intention of remaining during the time it requires to finish the work."

Bridge over the Delaware.

The work on the new bridge over the Delaware river, at Trenton, is steadily progressing. The foundation for one of the piers, about 300 yards from the Jersey shore, is laid, and considerable work already done upon it. A flatboat, to be driven by a steam engine, with paddle wheels on either side, is in course of construction, to be used in carrying the stone from the shores to the piers. It is expected that all the piers will be laid and above water before winter sets in, with the expectation of finishing the entire structure next summer.

Bridge over the Genesee River.

The High Bridge across the Genesee River at Portage, Wyoming County, N. Y., is 800 feet long, and 234 feet high from the bed of the river to the rail. The masonry in the river is 30 feet high—the trestles 190, and the truss 14 feet. It contains 1,602,000 feet B. M. timber; 108,862 lbs. iron in bolts, etc., and 9,200 cubic yards cement masonry. It was commenced 1st July, 1851, and completed so as to cross with an engine Aug. 14, 1852. It is estimated that one of the trestles, or bents, will sustain a weight of 3,109 tons in addition to its own weight and that of the truss above it. The general plan was designed by Silas Seymour, Chief Engineer of the Buffalo and New York City Railroad.

THE FARNLEY IRON CO.,

Near LEEDS, Yorkshire,

MANUFACTURERS OF

LOCOMOTIVE TIRES,

TIRE BARS,

BOILER PLATES, ETC.

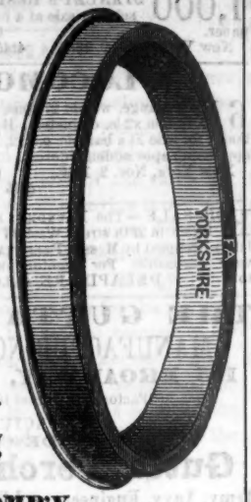
The undersigned are prepared to execute orders for

TIRES,

Manufactured at these celebrated Works,

OF ALL SIZES.

A STOCK CONSTANTLY ON HAND.



The quality of the **FARNLEY IRON** is precisely the same as that of **LOW MOOR** and **BOWLING**, being from the same bed of mineral.

For sale, **at manufacturer's prices,** by

M. K. JESUP & COMP'Y,
44 Exchange Place, New York,
SOLE AGENTS for the UNITED STATES and CANADAS.

RAILROAD IRON.

THE undersigned, having been appointed Agents for Messrs. BOLCKOW & VAUGHAN, proprietors of the

ESTON, MIDDLESBRO', and WITTON PARK

IRON WORKS, YORKSHIRE, ENG.,

are prepared to contract for the sale of **RAILROAD IRON** of a superior quality and on the most advantageous terms.

MEAD & BELL,
17 William st., N. Y.

LACKAWANNA

IRON AND COAL COMPANY,

SCRANTON, LUZERNE CO., PA.

BY the completion of the DELAWARE, LACKAWANNA AND WESTERN RAILROAD, this Company are enabled to obtain the MAGNETIC ORES from the most celebrated mines in New Jersey, which used in combination with their native ores, produce a **quality of iron not surpassed.**

These Works have been greatly enlarged the past year, and are, therefore, prepared to execute orders promptly for **RAILROAD IRON** of any pattern and weight, **Car Axles, Spikes,** and **Merchant Iron.** They have on hand patterns for **T Rails,** of the following weights per lineal yard, viz —**25, 30, 36, 40, 45, 50, 60, 62,** and **75** lbs.

Samples of RAILS and MERCHANT IRON may be seen at the office of the Company, **46 Exchange Place,** N. YORK.

Address **J. H. SCRANTON,** President,
Scranton, Pa.

or **DAVID S. DODGE,** Treasurer,
46 Exchange Place,
NEW YORK.

RAILROAD IRON.

THE RENSSELAER IRON COMPANY,

TROY, N. Y.,

OFFER Rails of their own manufacture deliverable as may be desired by purchasers.

OLD RAILS

received in exchange for new, or for re-manufacturing.

JOHN A. GRISWOLD, Agent,
TROY, N. Y.

New York Agency:
SUSSING, CROCKER & DODGE,
32 Cliff St.

CAST STEEL,

Of First Quality and Warranted.

BAR, TOOL, DRILL, AND DIE STEEL.
LOCOMOTIVE, CAR AND CARRIAGE CAST STEEL.
CAR SPRING STEEL,
Far superior to the ordinary kind.
FROG PLATES, POINTS.
Saw, File, Cutlery, Rake, Hoe, Axe and **Plough Steel. Gun Metal. Wire** and **Machinery Steel.**
ORDERS FILLED PROMPTLY AND AT LOW PRICES.

SALTUS & CO.,
45 Cliff st., New York.

IRON BOILER FLUES.

LAP-WELDED BOILER FLUES,

1½ to 7 inches outside diameter, cut to definite length, 2 to 20 feet as required.

Wrought Iron Welded Tubes,

From ⅜ to 5 inches bore, with Screw and Socket Connections. T's L's, Stops, Valves, Flanges, etc., etc.

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MORRIS, TASKER & CO.,

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Established 1821.

WAREHOUSE—209 SOUTH THIRD STREET,

PHILADELPHIA.

STEPHEN MORRIS, THOS. T. TASKER, JR.
CHAS. WHEELER, JR., STEPHEN P. M. TASKER.

RAILROAD IRON.

THE subscribers are prepared to contract for **RAILS** delivered at an English port or at a port in the United States. Also for all descriptions of

RAILROAD EQUIPMENTS

upon favorable terms.

JOHN W. HULL & CO.,
No. 41 Exchange Place, NEW YORK.

RAILROAD IRON.

THE subscriber is prepared to enter into **CONTRACTS FOR RAILS** delivered at an English port or at a port in the United States.

JAMES TINKER,
54 Exchange Place,
NEW YORK.

Erie Rails, 57 to 58 lbs. per yard, on hand in NEW YORK and NEW ORLEANS.

MORRIS & JONES & CO.,

IRON MERCHANTS,

MARKET AND SIXTEENTH STREETS,

PHILADELPHIA.

IRON AND STEEL

IN ALL THEIR VARIETIES.

BOILER PLATE, BOILER RIVETS, CUT NAILS and SPIKES, CAR AXLES, RAILROAD IRON, PIG IRON, etc.

Having the selling agency of a number of the Rolling Mills, Furnaces and Forges in this State, **orders for any description of IRON** can be executed.

August 16, 1854.

RAILROAD IRON.

The Crescent Manufacturing Company

WHEELING, VA.,

ARE now prepared to execute, at short notice, orders for Rails of any required pattern and weight, and to re-roll old rails, on the most liberal terms. Address

N. WILKINSON, Sec'y,
WHEELING, VA.

RAILROAD IRON.

CONTRACTS for **RAILS,** at a fixed price or on commission, delivered at an English port, or at a port in the United States, will be made by the undersigned.

THEODORE DEHON,
10 Wall st., near Broadway, N. Y.

500 tons T Rails on hand, 54 to 57 lbs. per lineal yard.

RAILROAD IRON.

WOOD, MORRELL & CO.,

HAVING leased the extensive Works of the **CAMBRIA IRON COMPANY,** situated at JOHNSTOWN, Cambria Co., Penna., and purchased all their real estate, are now prepared to execute, at short notice, orders for **RAILS** of any required pattern or weight, on the most liberal terms.

PHILADELPHIA OFFICE, NORTH PENNA. R. R. BUILDING, **No. 407 Walnut st.**

RAILROAD IRON.

THE undersigned, Agents for leading Manufacturers in STAFFORDSHIRE and WALES, are prepared to contract for delivery on board ship at LIVERPOOL, or WELSH port.

C. CONGREVE & SON,
13 Cliff st., N. Y.

OIL! OIL!

PEASE'S

IMPROVED ENGINE and SIGNAL OIL,

FOR

RAILROADS, STEAMERS, PROPELLERS,

AND FOR EVERY CLASS OF

MACHINERY AND BURNING.

PRACTICAL TESTS, by Engineers and Machinists of Thousands of Gallons, **prove** this Oil to be **superior** for **Burning,** and **TWENTY-FIVE** per cent. more **durable** than Sperm Oil, for Lubricating, and the **only** Oil that is in all cases **reliable,** that will keep bearings **cool,** and

WILL NOT GUM.

In no case has it failed to meet the approval of the consumer.

The *Scientific American* and *Manufacturer's Journal,* after testing this Oil, pronounce it **superior** to any other for Lubricating.—For sale **ONLY** by the Inventor

F. S. PEASE, 61 Main st., BUFFALO.

Reliable orders filled for any part of the United States or Europe.

THE IMPERIAL

LUBRICATING OIL,

MANUFACTURED BY

J. C. HULL & SONS,

(Formerly W. HULL & SON,)

Nos. 108, 110, 112, 114, 116 & 118 Cliff St.,

NEW YORK,

For Railroads, Machine Shops, Steamships, Mills, etc.

THIS OIL having been before the public for a **long time,** and having been **extensively used** in different parts of the country, and on each occasion meeting with **unqualified approval,** renders the manufacturers confident when making the following claims:—

1st. **Its first cost is much less** than that of any Oil in use, of known merit or acknowledged worth.

2nd. It will **not in any way gum** or **clog up** any journal or bearing, **all the gum in the Oil being entirely decomposed.**

3rd. It will keep all journals and bearings **cool, clean** and **bright** as new, thus not only **saving wear and tear,** but **saving also** no inconsiderable amount of **motive power.**

4th. It is fully as **durable** as any Oil in the market, and consumers are invited to make their experiments on such journals as are inclined to heat up.

5th. It is **sweet** and **clean,** and entirely **free from all odor or unpleasant smell.**

6th. It will remain limpid at as low a temperature as sperm.

CERTIFICATES from a large number of **Railroad** and **Steamboat officers,** also, prominent **Manufacturers** and **Machine Builders,** can be seen by application as above.

RAILROAD IRON.

THE undersigned, agents for the manufacturers, are prepared to make **CONTRACTS FOR RAILS** delivered free on board at ports in England, or exship at ports in the United States

M. K. JESUP & COMP'Y,
44 Exchange Place.

New York, 1st June, 1859.

HOFFMAN'S ROSENDALE CEMENT,

OFFICE, 92 WALL ST., NEW YORK.

THE LAWRENCE CEMENT COMPANY are prepared to receive and execute orders for their Cement, to any extent that may be required. They would particularly call the attention of purchasers to the distinguishing brand of their manufacture, viz.: **HOFFMAN'S ROSENDALE CEMENT.** This seems to be necessary, as they have established a reputation for the superior quality of their Cement, and there are various other brands offered, as "Rosendale" Cement. It has the unqualified approbation of the most eminent Architects and Engineers, being used in almost every department of the Works under Government. It is put up in the most careful manner, each barrel being well lined with paper, and will be delivered on ship-board, in this city, on the most favorable terms. Particular attention given to shipping orders, and Freight obtained on the best terms.

M. W. WOODWARD, Secretary.

DELAFIELD & BAXTER'S,

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ROSENDALE CEMENT.

WE are prepared to enter into arrangements for supplying our CEMENT for public works, or other purposes. We **warrant it equal in every respect** to any manufactured in this country. It attains a great degree of hardness, sets immediately under water, and is a **superior article** for masonry coming in contact with water, or requiring great strength.

For sale in tight barrels, well paperred, on application at their office, by **DELAFIELD & BAXTER, 104** Wall st.

The above CEMENT is used in most of the fortifications building by government. 45

GUTTA PERCHA CEMENT ROOFING.

THE **Cheapest** and most **DURABLE ROOFING** IN USE. Sent to any part of the country with *directions for application.*

SPECIMENS and *references* can be seen, and any desired information obtained on application, by *letter* or in *person*, at our OFFICE, **510 BROADWAY, N. Y.** (Opposite the St. Nicholas Hotel). JOHNS & CROSLEY.

THE LAWRENCEVILLE MANUF'G CEMENT COMPANY,

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THIS Company manufacture **ROSENDALE HYDRAULIC CEMENT** of a superior and uniform quality, and are constantly receiving it **fresh** from their Works at Rosendale. Particular attention paid to grinding **fine,** and packing in superior casks. We warrant it to set under water, and attain a hardness excelled by no Cement manufactured. It has met the approval of Government, and we are at present supplying the fortification now in course of erection, together with Water Works and Public Buildings.

For sale upon favorable terms by addressing.

WM. N. BEACH, President.
CHAS. E. LAWRENCE, Sec'y.

CEMENT, PLASTER, ETC.

THE HUDSON RIVER CEMENT CO.

HAVE commenced manufacturing for the season, and can now furnish a very superior article of fresh **Rosendale Cement, Calcined Plaster, Farmers' Plaster** and **Marble Dust.** Address

HUDSON RIVER CEMENT COMPANY,
12 **Jersey City, N. J.**

Rosendale Hydraulic Cement.

THE NEWARK AND ROSENDALE CEMENT COMPANY are now receiving **fresh from the Mills** their approved ROSENDALE CEMENT, warranted **pure** and **free from quick lime,** and which has given such **general satisfaction** in the various government and other public works in which it has been used. Purchasers and shippers should be careful to get the **genuine ROSENDALE CEMENT,** branded "NEWARK AND ROSENDALE," "H. WILDE." This Cement does not swell and burst the hoops when stored in warm climates. It is packed in tight **kiln dried barrels,** and is specially adapted for safe shipping on long voyages. Terms reasonable, which may be known by addressing,

JOHN H. STEPHENS, President, Newark, N. J., or **HENRY WILDE,** Secretary, 90 Wall st., N. Y.

DR. A. MERRIMAN,

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1 Waverley Place, opposite New York Hotel,

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DOUBLE and SINGLE PLATE CAR, ENGINE AND TRUCK WHEELS,

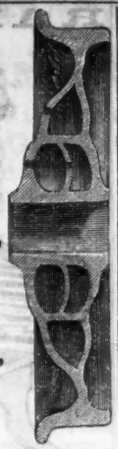
MANUFACTURERS AND PROPRIETORS OF

MOORE'S PATENT TRIPLE PLATE CAR WHEEL.

CHILLED LOCOMOTIVE TIRES,

Made from the best Charcoal Cold Blast Iron.

HIRAM W. MOORE,
GEORGE ADAMS.



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BUSH & LOBDELL,

WILMINGTON, DELAWARE,

MANUFACTURERS OF

CHILLED WHEELS

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TIRES,

FOR RAILROAD CARS

AND

Locomotive Engines,

ARE PREPARED TO EXECUTE PROMPTLY *ORDERS TO ANY EXTENT FOR THEIR*

CELEBRATED WHEELS,

EITHER SINGLE OR DOUBLE PLATE,

WITH OR WITHOUT AXLES.

WHEELS FITTED

To HAMMERED or ROLLED AXLES,

IN THE BEST MANNER, AT THE SHORTEST NOTICE,

AND ON THE MOST REASONABLE TERMS.

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CAR WHEEL WORKS,

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FURNISH

CHILLED WHEELS,

FOR CARS, TRUCKS, and TENDERS.

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FOR LOCOMOTIVES.

ROLLED AND HAMMERED AXLES.

WHEELS and AXLES,

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A statement showing the capital, dividend months, and last semi-annual dividend of the Banks and Insurance Companies of the city of New York, will be forwarded by mail upon application.

REFERENCES.—Messrs. Wm. and Jno. O'Brien, Thos. Denny & Co., Horace Greeley & Co., Cragin & Co., Todd & Co., J. & C. Berrian, Geo. F. Nesbitt & Co. Eugene Plunkett, Esq., (President Excelsior Ins. Co.), John C. Storm, Esq., (President Lenox Ins. Co.), L. G. Irving, Esq., (Secretary Niagara Ins. Co.), Marcus Spring, Esq., Oliver H. Lee, Esq., John H. Griscom, M. D., Rev. Edwin F. Hatfield, D. D., Rev. Theo. L. Cuyler, John Camerden, Esq., Benj. F. Manierre, Esq., New York; Otis Allen, Esq., Albany N. Y. Messrs Gorham & Co., Providence, R. I.

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Messrs. Thompson Bros., Bankers,	"	Hon. Judge Lord, La Crosse,	"
Messrs. Sewell, Ferris & Co.,	"	Jno. M. Levy, Banker,	"
Geo. P. Rogers, Esq.,	"	Hon. Franklin Steele, Minnesota.	
A. Gridley, President McLean Co. Bank, Illinois.		A. & W. A. Saunders, Bankers, Mt. Pleasant, Iowa.	